



# **Thrive Quad Cities: An Education and Workforce Analysis Final Report**

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# Contents

<b>Executive Summary: Thrive Quad Cities Education and Workforce Analysis.....</b>	<b>iv</b>
<b>I. Introduction .....</b>	<b>1</b>
Project Approach and Key Questions .....	2
Project Methods and Analyses .....	3
Project Limitations.....	5
Structure of the Report .....	6
<b>II. Findings .....</b>	<b>7</b>
Findings from Engagement with Key Interest Groups .....	7
Regional Economic, Workforce, and Educational Alignment Findings.....	9
Postsecondary Workforce Analysis Overview of Findings.....	11
Health Care Findings .....	13
Manufacturing Findings .....	15
Wholesale Trade, Transportation, and Warehousing Findings.....	17
Information and Digital Technology Findings .....	18
Management and Business Administration Findings .....	20
Overview of Equity Analysis Findings .....	22
<b>III. Recommendations.....</b>	<b>27</b>
Preparing and Supporting the Workforce .....	27
Higher Education and Training Programs Fill Needs and Gaps .....	33
<b>IV. Economic, Workforce, and Education Analysis .....</b>	<b>38</b>
Workforce and Demographic Profile .....	39
Economic and Occupational Demand Analysis .....	41
Occupational Cluster Analyses.....	56
Educational Programs and Pathways .....	90
K–12 CTE Concentrators by District and Clusters .....	91

Postsecondary Awards by Institutions and Clusters in the Quad Cities .....	93
Employment by Clusters .....	95
Pathway Alignment: Illinois, Iowa, Quad Cities .....	96
<b>V. Postsecondary Workforce Analysis.....</b>	<b>102</b>
Considerations .....	102
Postsecondary Programs and Workforce Shortages .....	105
Health Care .....	108
Manufacturing .....	110
Wholesale Trade, Transportation, and Warehousing .....	112
Information and Digital Technology .....	114
Management and Business Administration .....	116
Skills Gap Assessment .....	118
<b>VI. Conclusion .....</b>	<b>129</b>
<b>Reference List .....</b>	<b>131</b>
<b>Appendix A: Methods.....</b>	<b>133</b>
<b>Appendix B: Workforce Overview and Training Partners.....</b>	<b>142</b>
<b>Appendix C: Funding Resources.....</b>	<b>157</b>
<b>Appendix D: Organizations and Public Services.....</b>	<b>162</b>
<b>Appendix E: Opportunity Maps.....</b>	<b>176</b>
<b>Appendix F: Energy and Utilities .....</b>	<b>183</b>
<b>Appendix G: Replication Toolkit.....</b>	<b>186</b>

# Executive Summary: Thrive Quad Cities Education and Workforce Analysis

In 2023, the Illinois Board of Higher Education (IBHE) contracted with WestEd to conduct an education and workforce analysis of the Quad Cities region. The project, entitled “Thrive Quad Cities,” was intended to be the first in a series of regional analyses that IBHE would conduct to support the implementation of its state strategic plan.<sup>1</sup> The analysis included the following mixed methods and data:

- outreach and engagement with key workforce, education, and community groups;
- labor market and economic data to understand the regional economy, economic trends, and occupational demand; and
- education and demographic data to explore regional participation, gaps, and opportunities in postsecondary education and pathways leading to employment.

The primary question driving the analysis was *How can higher education be responsive to the region’s education, training, and economic needs?* This executive summary outlines the key findings and recommendations from the report, *Thrive Quad Cities: Education and Workforce Analysis*. The full report offers additional information and details.

## Key Findings

The analysis of engagement with key interest groups and of economic, labor market, and pathway data uncovered findings about the education and workforce landscape in the Quad Cities. These findings highlight challenges, opportunities, and areas of need that can inform education and training efforts.

**Primary Education and Workforce Challenges.** Interest groups reported multiple education and workforce challenges in the Quad Cities with thematic analysis uncovering the following:

- **Challenges exist attracting and retaining regional talent.** This challenge stems from younger learners pursuing education and work elsewhere and difficulty with attracting or retaining workers to meet regional economic needs.
- **Career awareness needs to be strengthened regionally.** Reports across interest groups indicated that students, adult learners, and job seekers lack awareness of quality, high-wage, high-demand jobs and careers in the region.
- **Siloes exist among the region’s educational segments and workforce systems.** Key interest groups believed that K–12 education, adult education, and the workforce system could better coordinate to develop pathways aligned to labor market demand, including by engaging industry.

The analysis of information from key interest groups and regional data also highlighted additional challenges, such as the following:

- **Regional skills gaps exist** for high-skilled occupations and occupations with specialized skill sets. Gaps exist for high-skilled occupations such as engineering (e.g., structural, mechanical, and

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<sup>1</sup> See <https://ibhestrategicplan.ibhe.org/IBHE-Strategic-Plan-2021.html> for more information about IBHE’s strategic plan, *A Thriving Illinois*.

- electrical engineering) and for occupations with specialized skill sets, including computer numerical control machining (CNC), engineering technology, fabrication, nursing, social work, the mental health professions, and other medical professions.
- **K–12 teacher training needs exist.** K–12 teacher training needs include strengthening the teacher training pipeline, helping more teachers obtain English as a Second Language (ESL) certification, and pathways and support for master's degrees and dual credit certifications.
- **Additional supports are needed for workers and families.** Additional regional supports are needed to help many workers and families enter and stay in the workforce. This includes increased transportation for adults and school-age children, childcare for second- and third-shift workers, and supports for individuals needing specialized help to access training programs.

**Opportunities to Address Challenges.** The analysis uncovered findings with opportunities to address challenges, notably the following:

- **Strategies to expand communication efforts can help coordinate career awareness.** To address career awareness gaps, there's a need for coordinated outreach and marketing efforts and strengthened K–12 and college engagement about high-value career pathways.
- **There is a need for expanded work-based learning (WBL) and apprenticeships.** Key interest groups agreed on the need for and recommended the equitable expansion of WBL for learners across the region and the creation of more pre-apprenticeship and apprenticeship pathways.

**Top Five “Industry” Sectors and Correlated Highest-Demand Occupations.** The analysis identified five occupational clusters with ongoing demand, indicating areas for program enhancements in the Quad Cities (see the full report for details). Three of these occupational clusters correlate to the largest industry sectors based on economic output, including **manufacturing** with top occupational demand for team assemblers; **transportation, warehousing and wholesale trade** for material movers; and **health care** for registered nurses.

The last two are crosscutting occupational clusters with high demand: **information and digital technology** with top occupational demand for software developers and **management and business administration** for general and other managers.

**Specialized and Technical Skill Demands are High.** Regionally, demands are high for specialized and technical skills. These include essential skills to target in project management, nursing sciences, warehousing, accounting, auditing, bookkeeping, finance, and valid driver's licenses and software skills.

**Equity Gaps Exist in Completion Rates for High-Wage Occupations.** Analysis of occupational clusters within the top five “industry” sectors indicates disproportionate impact among completion rates for higher-wage occupations across gender, race, and ethnicity.

**Postsecondary Training Programs with Workforce Shortages Exist.** Analysis of postsecondary training programs with shortages within the region include programs in business, management, marketing, and related support services; nursing assistant/aide; patient care assistant/aide; machine tool technology/machinist; truck and bus driver/commercial vehicle operator and instructor; general computer and information sciences; and administrative assistant and secretarial science.

## Recommendations

Based on the synthesis of findings, the following recommendations are offered to support education and workforce development and bolster the higher education and training programming in the region:

**Create Cohesive Career Awareness Activities and Campaigns in K-12 Aligned with Regional Economy Needs.**

Adopt a cross-segment approach to build campaigns about high-wage, high-demand careers in the Quad Cities and to respond to a need for increased regional education and career awareness. Strategies include career awareness activities for K–12 students and families; flexible school and work scheduling to allow and include career exploration; and incentivizing deep, sustained industry engagement.

**Further Develop K–12 Student Pipelines to Address Gaps and Support Success to In-Demand Occupations.**

One way to address gaps and support student success in K–12 pipelines to in-demand occupations is by improving matriculation rates and postsecondary readiness in K–12. Postsecondary institutions can support this by improving the accessibility and affordability of local postsecondary programming in high-demand occupation training programs.

**Expand K–12 Teacher Opportunities for Dual Credit and English Language Learner (ELL) Certification.**

To address K–12 teacher training needs, examine ways to remove barriers for teachers to become dual credit or ELL certified. The Illinois State Board of Education (ISBE) could work to find ways to simplify the educator licensure process and support teachers in finding ways to offset the costs of these programs.

**Expand 2+2 Programming Options.** Programs called “2+2” combine two years of community college with two years of university for the completion of a traditional bachelor’s degree. Because the Quad Cities has a limited number of these institutional agreements, expand 2+2 programs to open transfer opportunities across the region.

**Increase Work-Based Learning (WBL) and Apprenticeship Opportunities.** WBL and apprenticeships bridge the gaps between education and employment, providing individuals with real-world experiences and skills. Strategies to increase WBL opportunities include creating a repository tool like the ISBE’s Work-Based Learning Employer CTE Database, working with community-based organizations to broker WBL access, and seeking funding to develop apprenticeships or programs with intermediary support.

**Increase Meaningful Connections Among Employers and Education Partners to Support Student Success.** To better coordinate efforts among educational segments and workforce systems, increase meaningful connections among employers and education partners—which also strengthen opportunities for students’ educational and career success. *Expand the role of intermediaries to form regional industry sector partnerships, develop a career navigator program, and create accelerated and innovative learning models, and credit for prior learning* to coordinate connections that expand training opportunities.

**Support Wraparound Services to Allow Employees to Get to and Stay at Work.** To address additional service needs in the region, support wraparound services that help employees get to and stay at work. Wraparound services help potential job seekers and current workers navigate career trajectories. Key interest groups in the Quad Cities noted a need for enhanced childcare and transportation options.

**Expand, Fund, and Develop Additional Training Programs to Address Gaps Among Available Sector Jobs and Postsecondary Supply.**

Additional occupational training programs should be expanded, tailored, or developed to address gaps among available regional sector jobs, such as those highlighted within the sectors and occupational clusters analyzed in this report, and postsecondary supply. For example, offer a full supply chain management bachelor’s degree at Western Illinois University’s Quad Cities campus or leverage existing computer numerical control (CNC) programs at Black Hawk College. As part of this strategy, fund and support *accelerated and short-term training* and ensure that programming offers *stacked credentials for high-demand and high-wage careers*.

## I. Introduction

To support an economically vibrant future for individuals, families, and communities in Illinois, the Illinois Board of Higher Education (IBHE) developed a strategic plan in 2021: *A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth*.<sup>2</sup> The primary goals of this plan include

- closing equity gaps for underrepresented students and adult learners traditionally left behind, both educationally and economically;
- building a stronger economic future for individuals, families, communities, and institutions—especially employers and industries—as key drivers of economic growth; and
- strengthening talent pipelines aligned to the needs of regional employers and innovation in key industries to drive economic growth.<sup>3</sup>

*A Thriving Illinois* includes 25 strategies to strengthen regional talent development and innovation across Illinois's education and economic ecosystems. In 2023, IBHE contracted with WestEd to conduct an education and workforce analysis of the Quad Cities region in Illinois to inform a regional plan. This plan was intended to be the first in a series of regional analyses that IBHE would conduct to support the implementation of the 25 strategies in *A Thriving Illinois*. WestEd's analysis, contained in this report, is designed to inform a regional plan that can do the following:

1. Accelerate access to high-wage, high-growth career pathways through postsecondary education and training, in particular for historically underrepresented populations.
2. Strengthen employer access to a pipeline of skilled talent that supports a thriving and sustainable economy.
3. Be replicated in other regions and statewide as a model to increase access to and benefit from postsecondary education and training.

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2 Illinois Board of Higher Education. (2022). *Fiscal year 2023 higher education budget recommendations for operations, grants, and capital improvements*. [https://www.ibhe.org/board/2022/January/Item\\_D-1\\_approved.pdf](https://www.ibhe.org/board/2022/January/Item_D-1_approved.pdf)

3 Illinois Board of Higher Education. (2021). *Three goals: Equity, sustainability, and growth*. *A Thriving Illinois*. [https://ibhestrategicplan.ibhe.org/SP\\_Equity-Sustainability-Growth.html](https://ibhestrategicplan.ibhe.org/SP_Equity-Sustainability-Growth.html)

Quad Cities is a border region that includes communities in both Illinois and Iowa. The greater metro area includes five cities:

- Bettendorf and Davenport, located in Scott County, Iowa; and
- East Moline, Moline, and Rock Island, located in Rock Island County, Illinois.

The regional economic and labor market analysis in this study includes data collected for these two counties as well as two neighboring counties in Illinois, Henry and Mercer Counties, which contain the primary transportation arteries into the Quad Cities area, to ensure a comprehensive understanding of regional economic characteristics and employment demand for the region.

## **Project Approach and Key Questions**

This report is informed by research and activities conducted between September 2023 and June 2024. These included qualitative and quantitative data collection and analyses of economic, education, and workforce system data from multiple sources. There were three types of primary data collection:

1. Outreach and engagement with key workforce, education, economic development, and employer/industry interest groups to understand gaps and opportunities in the regional workforce, education, and economic ecosystems.
2. Collection of labor market and economic data to build a model of the regional economy, economic trends, and occupational demand, particularly for high-wage, high-growth jobs.
3. Collection of education and demographic data to explore regional participation, gaps, and opportunities to better understand postsecondary education and training pathways leading to employment, and patterns in who is participating in those pathways.

The primary and underlying question driving this analysis, in alignment with IBHE's mission, is *How can higher education be responsive to the region's education, training, and economic needs?* To unpack this question, it was necessary to understand the specific role of higher education institutions and programs in meeting these needs, and to explore how other systems serve the region, including K–12 education, the Workforce Innovation and Opportunity Act (WIOA), community-based organizations, and industry intermediaries such as the Bi-State Regional Commission and the Quad Cities Chamber of Commerce.

This broader approach included research questions that guided both the data collection and engagement with key interest groups, including the following:



<b>Collaboration Among Education Segments and Industry</b>	<ul style="list-style-type: none"> <li>• How do K–12 and other educational systems connect to support intersegmental career pathways and learner journeys?</li> <li>• How does higher education collaborate with regional industry to support strong regional pathways leading to quality jobs?</li> <li>• How do other organizations, such as industry intermediaries, community-based organizations (CBOs), and workforce boards, collaborate with education and industry to support a strong regional pathways ecosystem?</li> </ul>
<b>Career Pathway Development and Workforce Alignment</b>	<ul style="list-style-type: none"> <li>• How do the higher education systems in the region prepare and provide education and career pathways support and opportunities?</li> <li>• Are higher education pathways in the region aligned to (and do they supply) the regional labor marketplace?</li> <li>• What are the education and training models that work well or that could be replicated?</li> </ul>
<b>Economic and Workforce Context, Needs, and Strategies</b>	<ul style="list-style-type: none"> <li>• What are the top industries and high-demand entry-level and middle-skills jobs in the region?</li> <li>• What skills are employers looking for (by degree/certification attainment, by job level, by industry/sector)?</li> <li>• What are the needs of the regional workforce and employers, particularly related to top industries and those with growth potential?</li> </ul>

The activities and research used to prepare this report were designed to inform answers to these questions, which in turn inform the report’s findings.

## Project Methods and Analyses

The three primary activities informing this report include engagement with key regional interest groups, analysis of regional economic and labor market data and indicators, and analysis of regional educational pathways and participation. These activities include qualitative and quantitative approaches that were threaded together and cross-checked with various feedback mechanisms including validation with key interest groups and an advisory committee. More detail on the methodologies used is presented in Appendix A.

**Engagement with Key Interest Groups:** In collaboration with IBHE, the WestEd team conducted a set of engagement activities that scaffolded discussion, discovery, and relationship building.

- **Key Interest Group/Holder Scan, Outreach, and Key Informant Interviews** – The WestEd team completed a scan of key cross-sector/cross-segment groups in the region and conducted outreach to identify individuals for key interest holder interviews.<sup>4</sup> Eighteen interviews were conducted in total.
- **Advisory Committee** – Champions were identified from key interest groups to participate in an advisory committee. These members represented different perspectives on education and workforce needs, supported outreach, and provided feedback on findings. See *Thrive Quad Cities Project Advisory Committee* below.
- **Roundtables** – Four roundtable discussions were held, including two industry roundtables (one focused exclusively on manufacturing), one education, and one CBO convening.<sup>5</sup> The roundtables helped to establish cogent understanding of local contexts and bring additional perspectives to the fore of project efforts.
- **Surveys** – WestEd developed and conducted three online surveys to get input from employers, faculty, and students, with responses received from 27 employers.

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## Thrive Quad Cities Project Advisory Committee

Education and workforce partnerships occur through a variety of frameworks and approaches, such as Collective Impact, P-16 and P-20 initiatives, and education and career pathways. A key strategy that helps drive partnerships includes bringing leaders or champions together to guide efforts, for advocacy, and to establish shared purpose and outcomes. The Quad Cities project coalesced an Advisory Committee that could speak to regional needs and experiences within education, workforce, public officials, and industry. Committee members represented leaders across education segments and organizations such as community-based organizations or wraparound services and programs. These individuals also shared current Quad Cities education and programming models, strategies, and initiatives that could be tapped into as potential opportunities to address needs.

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**Education and Economic Landscape Analysis:** WestEd analyzed the local education and workforce landscape through a review of labor market trends, occupational demand, student

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4 The purpose of the informant interviews was to speak to at least one representative from each of the following targeted segments: local officials, higher education, K–12, industry, workforce, and community-based organizations.

5 Sixteen individuals participated in the industry roundtables, representing 13 different companies. The education roundtable included 13 individuals from different education segments and institutions. Nine individuals from eight CBOs participated in the CBO roundtable.

educational data, and a scan of training pathways leading to employment. This landscape analysis included the following:

- **Regional Economic Analysis** – This included a review of gross regional product and industry sector trends to understand the regional economic context, with average annual job openings, annual hires, median wages, typical educational requirements, and employment concentrations to illustrate economic trends and occupational demand. The review also included an examination of occupational trends (past and future projections) and a review of skills demand using quantitative and qualitative employer inquiry in the Quad Cities.
- **Occupational Cluster Analyses** – Along with regional economic demand, WestEd conducted analysis of occupational demand in five industries and occupational clusters. The analysis included occupational data focused on (a) health care; (b) manufacturing; (c) transportation, warehousing, and wholesale; (d) information technology (IT) and digital technology; and (e) management and business administration.
- **Mapping K–12 and Higher Education Pathways** – To explore the degree to which institutions work in balance with one another, the WestEd team explored the connections among K–12 career and technical education (CTE), community college and university degrees or certificates awarded, and the Quad Cities labor market. Multiple data sources were used, and a proportional analysis was employed.
- **Postsecondary Workforce Analysis** – To understand the gaps between educational supply and regional industry demand, WestEd conducted a gap analysis to identify where education was undersupplying regional needs for talent.
- **Equity Analysis** – In addition to overall educational supply, WestEd analyzed completions and degrees awarded by race and ethnicity at five core institutions by industry to be able to identify equity gaps and considerations. These findings are included in the sector deep dives.
- **Skills Gap Assessment** – Skill tables were created for education interest groups to understand and crosswalk curricula content with specialized skills that align with high-demand occupations in the top five industry sectors and clusters in the region. The tables show educational attainment requirements aligned with specialized skills for occupations in demand across the top five sectors and clusters.

## Project Limitations

Thrive Quad Cities is designed to increase understanding of the education and economic landscape in the region for capacity building and to inform a regional plan. It is aligned and

tailored to the local context, perspectives, and data, so the ability to generalize findings to other regions or contexts has limitations. Considerations for replication beyond the region are shared in Appendix G.

## **Structure of the Report**

To simplify identification of key findings and recommendations for the reader, those sections have been moved up in the report to follow immediately after this introduction. The sections thereafter include the analyses that inform the findings and recommendations. The order of the analyses is designed to build additional layers of understanding of the Quad Cities economic, labor market, and educational landscapes, building toward gap analyses of educational supply and demand, in particular mismatches between current postsecondary completions and the needs of priority occupations and industries in the Quad Cities region.

Appendices following the main report include detailed methodology, an overview of the workforce landscape and training providers in the region, a list of available funding resources for education and workforce efforts, a list of regional wraparound supports and services, and a toolkit to be utilized for replication of this study. Two other appendices include a series of “Quad Cities Opportunity Maps” that provide a picture of the regional sector-based career pathways and corresponding educational trajectories, and a sector analysis on energy and utilities.

## II. Findings

The analysis of engagement with key interest groups and of economic, labor market, and pathway data uncovered findings about the education and workforce landscape in the Quad Cities. These findings highlight challenges, opportunities, and areas of need that can inform education and training efforts.

### Findings from Engagement with Key Interest Groups

In total, 83 individuals, including local officials, industry partners, higher education, K–12, and workforce system leaders, and representatives from community organizations, participated in informant interviews, the project advisory committee, or roundtable discussions or responded to one of the three project surveys. The qualitative data from these activities were thematically analyzed and triangulated with the project’s education, workforce, and economic analyses. Although participation could have been more substantial (despite extensive outreach), those who did participate were eager to champion the work—lending input, brokering additional contacts, strengthening mutual understanding, and contributing critical thoughts about how to better strengthen regional career pathways and talent pipelines. The major findings from this process identified primary education and workforce challenges and ideas for opportunities to address challenges. These include:

- **Challenges Exist Attracting and Retaining Talent in the Quad Cities** – Key interest groups reported multiple challenges attracting and retaining talent due to both (a) out-migration of younger learners pursuing education and work elsewhere and (b) difficulty attracting and retaining enough working-age adults to meet the needs of the region’s growing economy (e.g., since the COVID-19 pandemic).

A common theme heard was the importance of expanding the K–12 pipeline and developing transparent pathways and programs for K–12 students and adult learners to obtain quality, high-wage jobs through stackable credentials and accelerated degree paths. Interest group holders also underscored the importance of higher education and employers building programs that are better aligned to industry needs and that clearly signal opportunities in the area, to both retain and attract talent in the region.

- **Career Awareness Needs Strengthening Regionally** – Reports across interest groups indicated that students, adult learners, and job seekers overall lack awareness of quality, high-wage, high-demand jobs and careers in the region. Interest group holders also cited the critical need for better coordinated outreach and marketing of regional opportunities and strengthening engagement of K–12 students and students entering college about

high-value career pathways. Strategies that interest groups offered to drive career awareness efforts included creating awareness activities and campaigns for K–12 students, families, and industry engagement.

- **Siloes Exist Among Regional Educational Segments and Workforce Systems** – While there are examples of specific strong regional partnerships between systems, including industry-centered events hosted by the Chambers of Commerce, interest group holders stated that they believed educational and workforce systems could be much more integrated and coordinated in the development of regional pathways from K–12 education, adult education, and the workforce system, including stronger shared mechanisms for engaging industry and ensuring that pathways are responsive to regional labor market demand.
- **Regional Skills Gaps Exist for High-Skilled Occupations and Occupations With Specialized Skills** – Key interest groups repeatedly reported gaps between needs for skilled workers and the skills of current job seekers in the regional talent pool. Interest group holders reported that these gaps were especially acute for high-skilled occupations such as engineering or occupations with specialized skill sets, including computer numerical control (CNC) machining, engineering technology, fabrication, nursing, social work, the mental health profession, and other medical professions.

Industry representatives reported that they often encounter job applicants lacking industry-specific training, skills, or experience necessary for their open positions due to a range of factors. Employers identified contributing factors including a shortage of faculty and trainers with up-to-date knowledge about new technologies, changing occupational skill requirements, and students leaving programs early without necessary skills or job credentials.

As a result, employers often recruit top students in fields such as engineering from institutions outside the Quad Cities area, including Iowa State University, the University of Illinois, and the University of Wisconsin–Platteville. Industry interest group holders reported that many specialized skills are not taught in programs in the region such as Revit, a 2D and 3D computer-based drafting tool important for students training for careers in structural, mechanical, and electrical engineering.

- **K–12 Teacher Training Needs Exist** – Critical K–12 teacher training needs exist, including (a) strengthening the overall teacher training pipeline; (b) helping more teachers obtain English as a Second Language (ESL) certification, given the increasing immigration of English language learners into the region; and (c) providing pathways and support for teachers to obtain master's degrees and dual credit certifications to ensure

that more high school students can earn early college credit toward an associate's degree and that more students can access transfer opportunities at community colleges.

- **Additional Supports are Needed for Workers and Families** – Additional regional supports are needed to help many workers and families enter and stay in the workforce. Interest groups identified critical needs that workers and families have for supports, including increased transportation options for adults and school-age children, childcare services for second- and third-shift workers, and supports for individuals trapped in persistent poverty or substance abuse who may need specialized help to access training programs leading to employment and career pathways. Although services and supports offered by community-based organizations, regional transit, employer programs, and educational institutions were identified as existing in the region, the availability of these services may not be well understood or coordinated to ensure access by workers and residents who need the services.
- **Need for Expanded Work-Based Learning (WBL) and Apprenticeships** – The region does not have widespread and coordinated programs with a range of employers to offer students on-the-job and hands-on training through WBL experiences such as job shadowing, internships, pre-apprenticeships, and apprenticeship pathways. Although there are exemplary WBL programs in the Quad Cities, such as John Deere's Part-Time Student Jobs program and the IGNITE program at Black Hawk College (BHC), interest holders from roundtables and the advisory committee agreed on the need for equitable expansion of WBL and the creation of more apprenticeships for learners across the region. These opportunities would help students better understand complex and changing specialized skills through real-world experience while meeting the needs of employers for more experienced talent.

## **Regional Economic, Workforce, and Educational Alignment Findings**

WestEd's analysis of regional workforce supply and demand and educational alignment comprised multiple types of data collection and analysis, including

- analysis of the composition of the Quad Cities regional economy, including identification of prominent industrial sectors based on economic output;
- identification of the highest-demand occupations within critical industry sectors and other occupations critical to business operations across a wide range of industries;
- workforce gap analysis mapping of postsecondary educational programs and production of degree and credential completers against occupational demand, to identify gaps and mismatches in the supply of and demand for skilled talent by industry;



- analysis of equity gaps or disproportionate patterns in the percentage of completers in regional postsecondary education programs based on age, gender, or race and ethnicity; and
- triangulation of supply and demand analysis with key interest holder engagement findings.

Data sources for this analysis included economic and labor market data pulled from Lightcast, educational data from the Illinois Board of Higher Education, publicly available data produced by the states of Illinois and Iowa, and data from the National Student Clearinghouse, US Census Bureau data, and other sources.

WestEd's analysis of regional economic and workforce trends identified three industry sectors and two cross-cutting occupational clusters that are in strong, ongoing occupational demand. The analysis also identified the correlated highest-demand occupations within each of the five sectors, indicating areas for program enhancements in the Quad Cities (see *Recommendations* section for more details). Three occupational clusters correlate to three of the largest industry sectors in the region based on economic output: **manufacturing** with top occupational demand for assemblers and fabricators; **transportation, warehousing, and wholesale trade** for material movers; and **health care** for registered nurses. The other two occupational clusters—**information and digital technology** show top occupational demand for software developers and **management and business administration** for general and other managers. These two crosscutting occupational clusters are in high-demand and are critical to business operations across numerous industry sectors that make up the Quad Cities regional economy. The remainder of this findings section will focus on major findings from WestEd's analysis of the Quad Cities regional economy, workforce demand, and the alignment of supply and demand with education.

### **Education and Workforce Supply and Demand Findings**

**In certain occupational clusters and specific occupations, there is a gap between occupational demand and regional production of graduates and credential completers to meet this demand.** For the findings that follow, educational completions and workforce demand are organized by Classification of Instructional Programs (CIP) codes and are compared to regional occupational demand using the federal CIP–Standard Occupational Classification (SOC) crosswalk, which aligns instructional program codes to occupational codes used by the Bureau of Labor Statistics.

Each chart that follows compares program completers who complete a postsecondary credential at either the community college or university level (certificate, BA, MA, or higher degree) with annual occupational demand corresponding to that program that requires some



college, an associate's degree, a BA, an MA, or more education. CIP codes can be analyzed at the broadest program level (two-digit CIP code) or at the level of individual programs (six-digit CIP code), corresponding to programs that produce graduates with specific occupational or subject matter expertise.

### **Instructional Program Areas Findings**

**Analyzing the education levels required for the average annual job openings crosswalked to the program areas at the two-digit CIP code level reveals that institutions may need to adjust operations to fill existing gaps.** For example, 90 percent of average annual job openings for transportation and materials moving are at the associate's degree level and below, whereas 77 percent of the annual job openings for engineering are at the bachelor's degree level and above.

Results at the program-area level are useful to understanding broad areas that have workforce misalignments; however, closer analysis is needed to understand skill gaps that exist and how they can be redressed. Additional figures in this section examine workforce shortages at the six-digit CIP level for Quad Cities key clusters including health care; manufacturing; wholesale trade, transportation, and warehousing; information and digital technology; and management and business administration.

A [Quad Cities Regional Dashboard](#) detailing the workforce alignment of all programs and the underlying labor market projections is available as an accompaniment to this report.

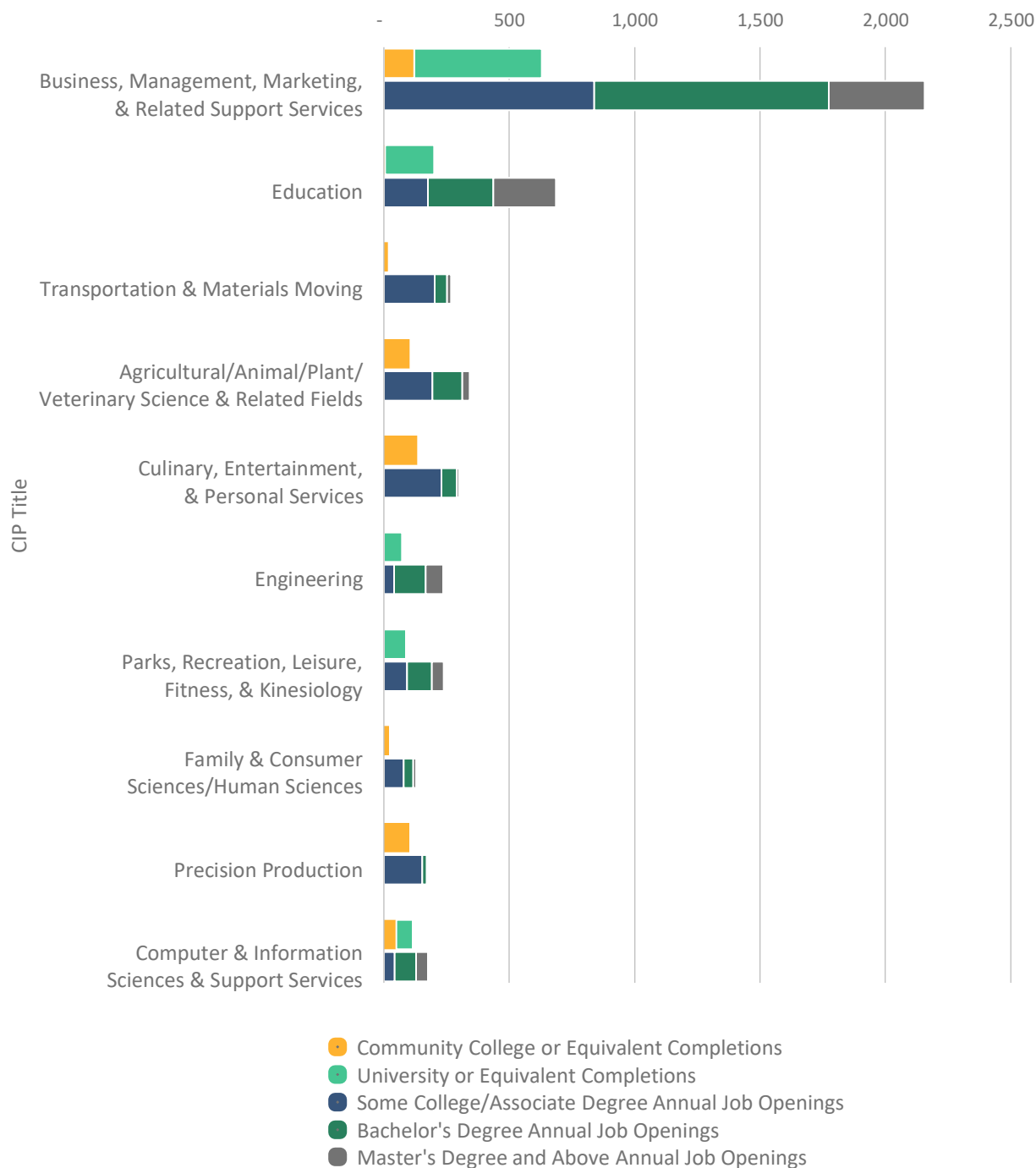
### **Postsecondary Workforce Analysis Overview of Findings**

A major component of the Thrive Quad Cities project is the data and analysis that illustrate connection between postsecondary educational program completions and job openings for various educational attainment levels, detailed in the workforce shortage figures below.

**Findings from the analysis indicate that postsecondary training programs exist with workforce shortages.** The findings and associated figures are examined with more detail in the Postsecondary Workforce Analysis section of the report, along with descriptions of the methods and considerations informing them.

Figure 1 displays the top 10 program areas, defined by their two-digit CIP code with a workforce shortage in the Quad Cities. As shown in the figure, **the category of business, management, marketing, and related support services has the largest workforce shortage in the Quad Cities.** This is followed by education; transportation and materials moving; and agricultural/animal/plant/veterinary science and related fields. Additional analyses of these findings are found in the *Postsecondary Workforce Analysis* section of the report on page 102.

**Figure 1. Top 10 Program Areas With a Workforce Shortage**

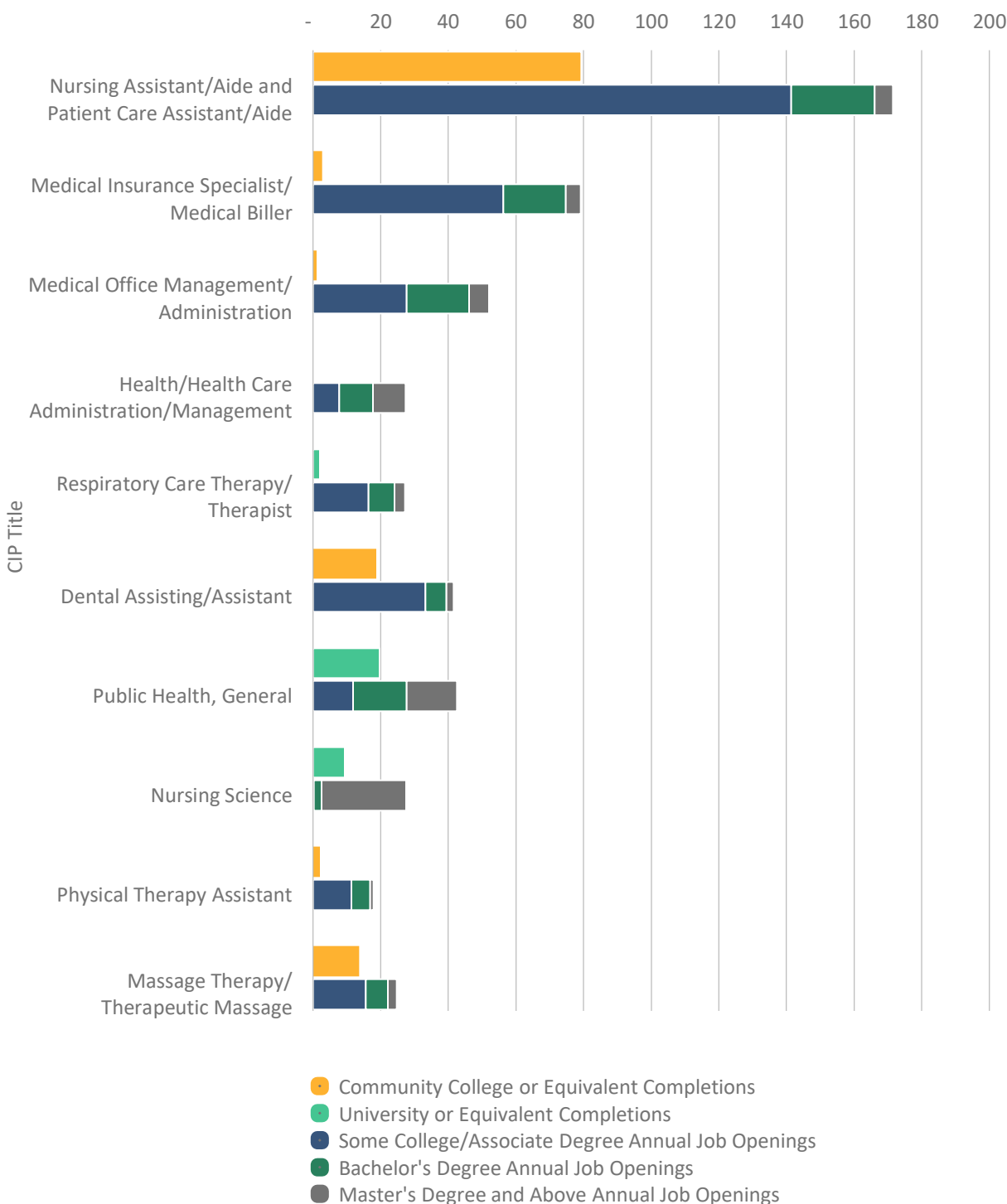


Sources: IBHE; Illinois Community College Board (ICCB); Integrated Postsecondary Education Data System (IPEDS); Lightcast, Q1 2024; WestEd analysis.

## Health Care Findings

Figure 2 displays the top 10 programs in health care with a workforce shortage. Health care has been defined as all six-digit CIP codes falling under 51.0000, Health Professions and Related Programs. As shown in the figure, **nursing assistant/aide and patient care assistant/aide occupations have the largest workforce shortage**, followed by medical insurance specialist/medical biller; medical office management/administration; and health/health care administration/management. Additional analyses of these health care findings and of the five priority sectors shown below are found in the *Postsecondary Workforce Analysis* section of the report starting on page 102.

**Figure 2. Health Care: Top 10 Postsecondary Programs With a Workforce Shortage**

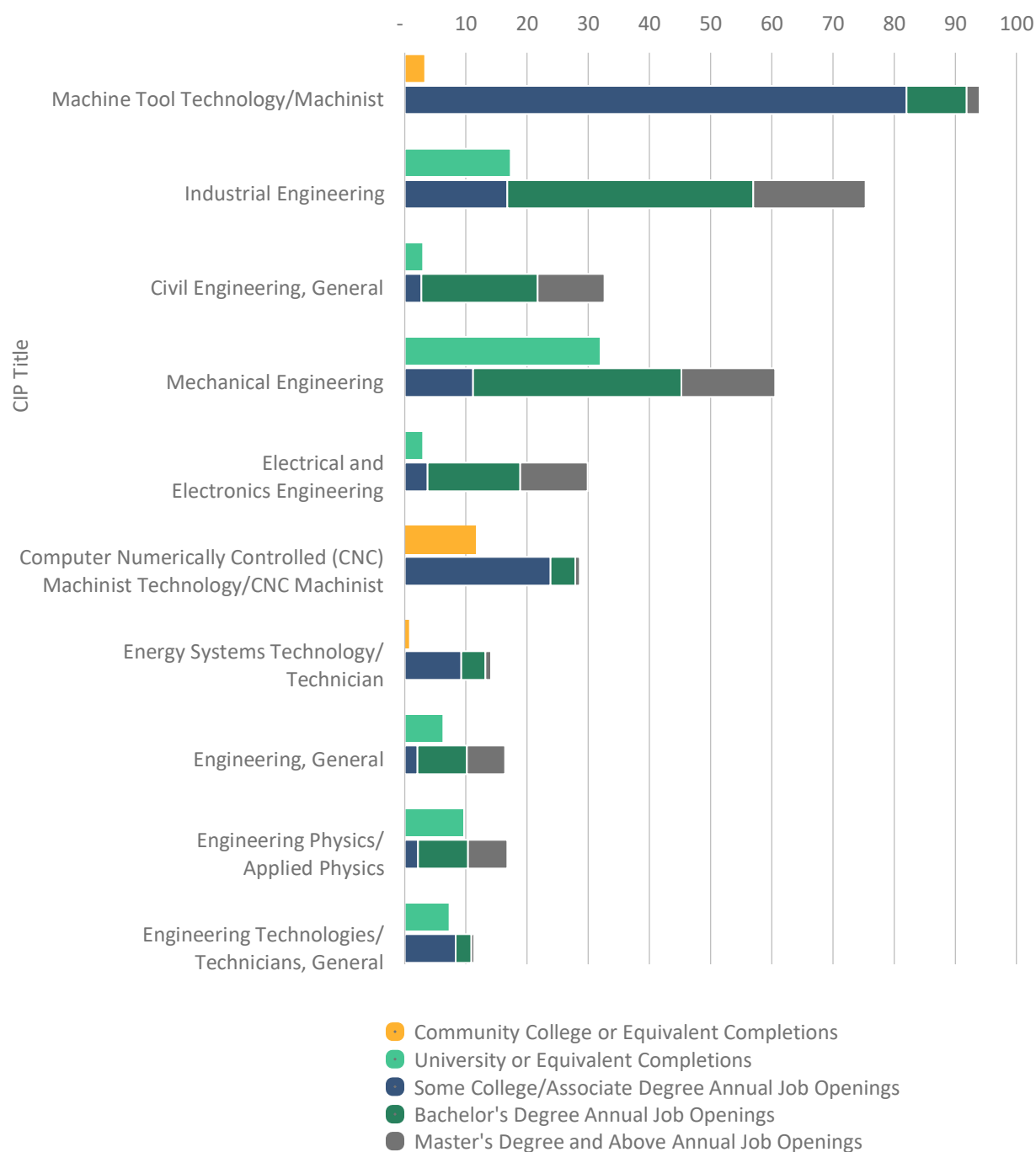


Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## Manufacturing Findings

Figure 3 displays the top 10 programs in manufacturing with a workforce shortage. Manufacturing has been defined as all six-digit CIP codes falling under 14.0000 and 15.0000, which are engineering and engineering/engineering-related technologies/technicians, respectively. Additionally, three programs from CIP 48.0000, precision production, have been included. As shown in the figure, the **machine tool technology/machinist category has the largest workforce shortage**, followed by industrial engineering; civil engineering, general; and CNC machinist technology/CNC machinist.

**Figure 3. Manufacturing: Top 10 Postsecondary Programs With a Workforce Shortage**

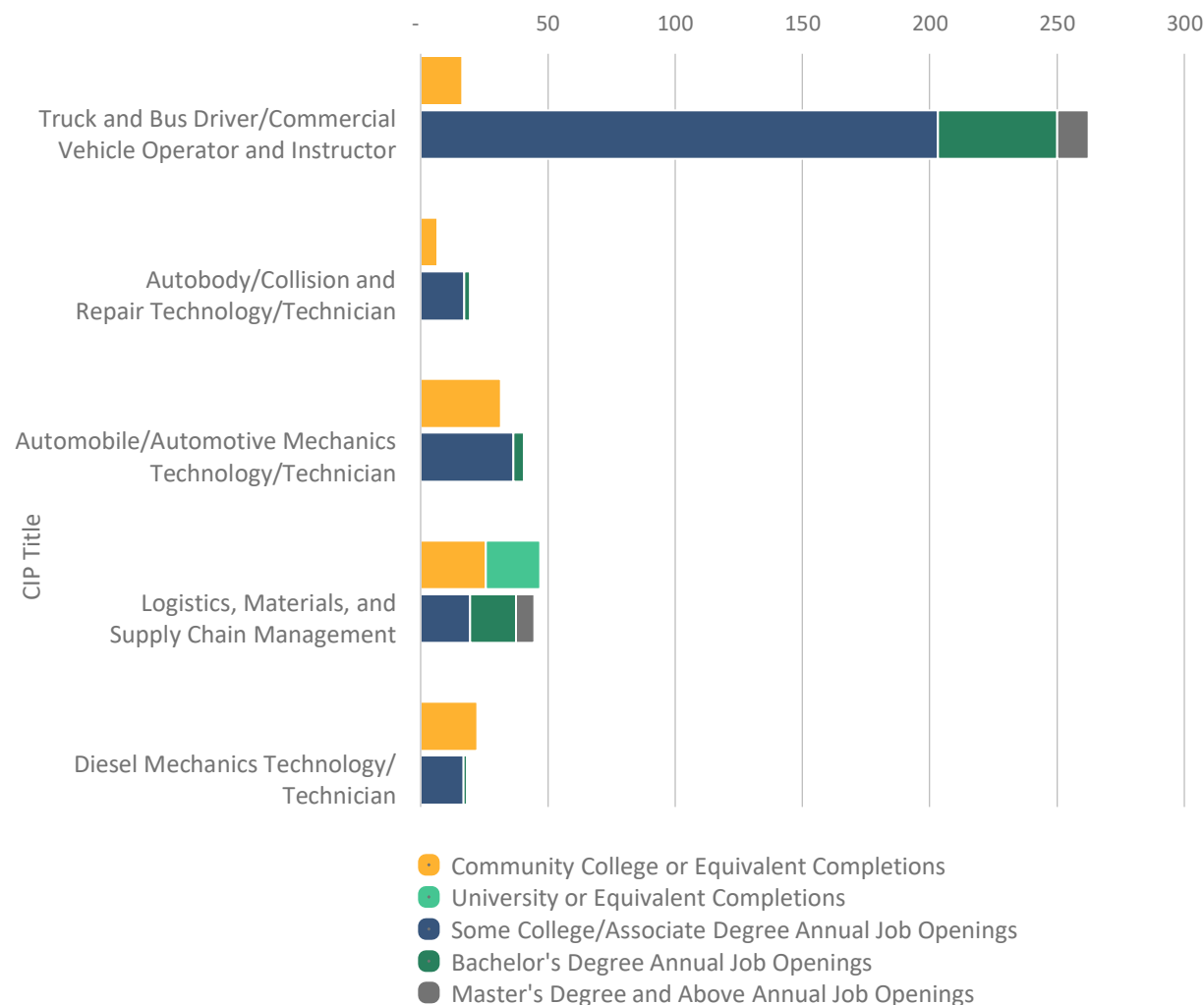


Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## Wholesale Trade, Transportation, and Warehousing Findings

Figure 4 displays the results for programs in wholesale trade, transportation, and warehousing. The wholesale trade, transportation, and warehousing category has been defined as all six-digit CIP codes falling under 49.0000, transportation and materials moving. Additionally, three CIP codes from 47.0000, mechanic and repair technologies/technicians, and one from 52.0000, business, management, marketing, and related support services have also been included. As shown in the figure, the **truck and bus driver/commercial vehicle operator and instructor category has the largest workforce shortage**, followed by autobody/collision and repair technology/technician and automobile/automotive mechanics technology/technician.

**Figure 4. Transportation: Top 10 Postsecondary Programs Findings**



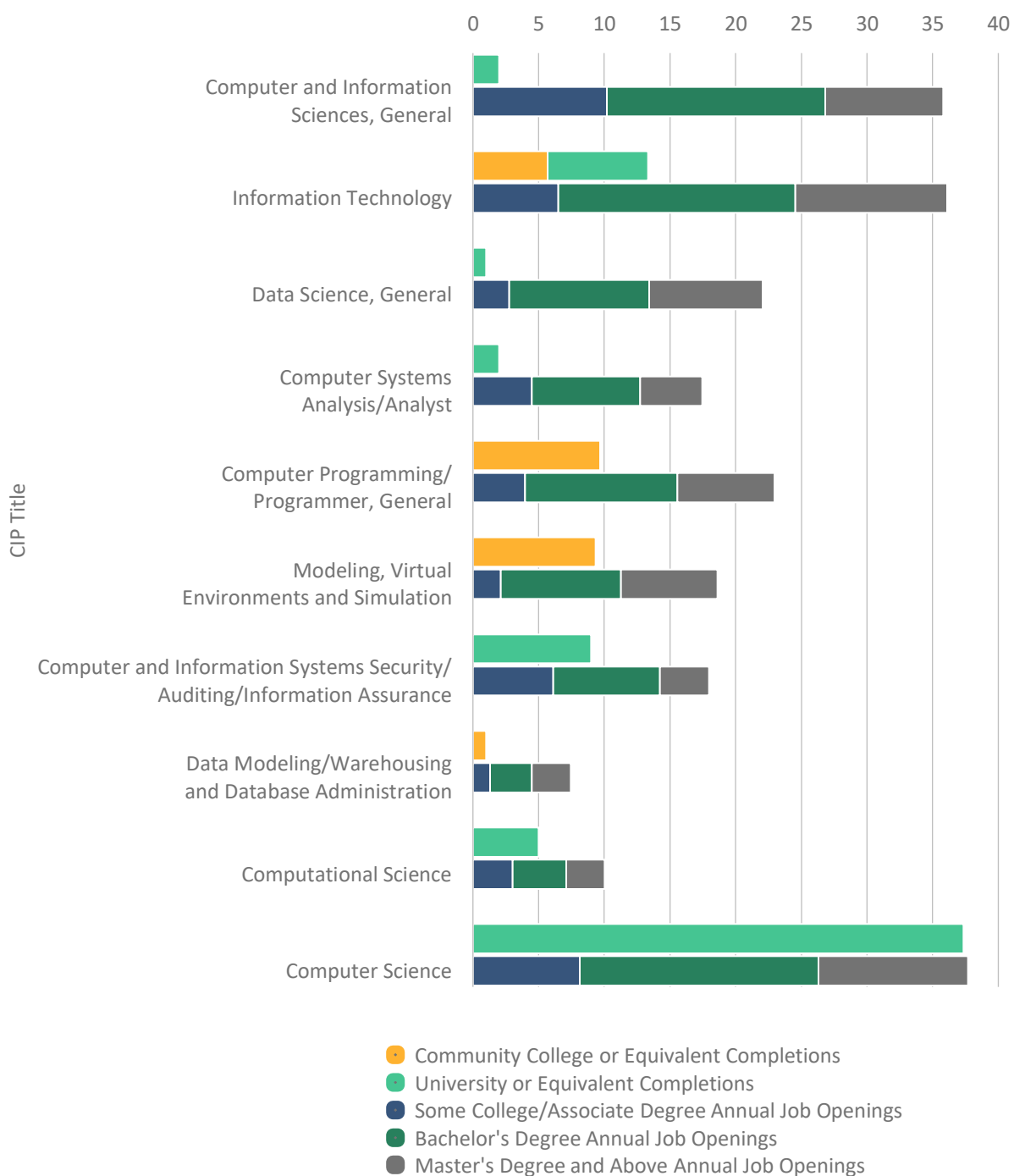
Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## Information and Digital Technology Findings

Figure 5 displays the top 10 programs in information and digital technology with a workforce shortage. Information and digital technology have been defined as all six-digit CIP codes falling under 11.0000, computer and information sciences and support services. Additionally, two programs from CIP 30.0000, multi/interdisciplinary studies, have been included. As shown in the figure **the category of computer and information sciences, general has the largest workforce shortage, followed by information technology; data science, general; and computer systems analysis/analyst**. Only two programs produce slightly more completers than job openings, indicating a broad shortage of talent within information and digital technology.



**Figure 5. Information Tech: Top 10 Postsecondary Programs With a Workforce Shortage**

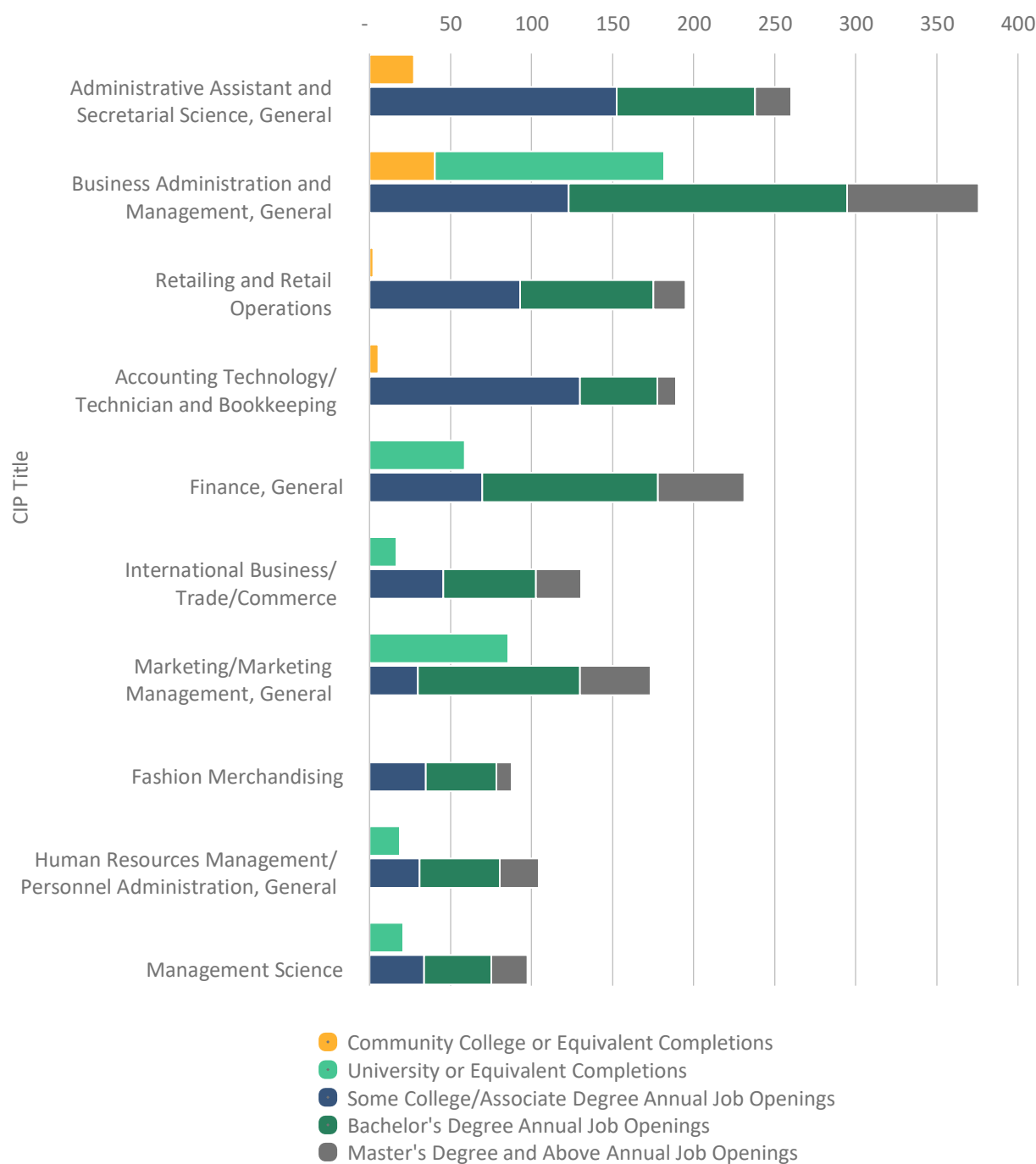


Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## **Management and Business Administration Findings**

Figure 6 displays the top 10 programs in management and business administration with a workforce shortage. Management and business administration has been defined as all six-digit CIP codes falling under 52.0000, business, management, marketing, and related support services with the exception of one program included in the wholesale trade, transportation, and warehousing sector. As shown in the figure, **administrative assistant and secretarial science, general has the largest workforce shortage**, followed by business administration and management, general; retailing and retail operations; and accounting technology/technician and bookkeeping.

**Figure 6. Management and Business: Top 10 Postsecondary Programs With a Workforce Shortage**



Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## Overview of Equity Analysis Findings

Economic opportunity is not experienced equally by different populations in Quad Cities. In particular, Hispanic/Latino, Black/African American, Indian, and Pacific Islander individuals and those who identify as two or more races experience poverty far in excess of White residents, with poverty rates ranging from 7.2 percent to 24.7 percent higher than those for White residents.

**Table 1. Aggregate Population and Poverty Data for Quad Cities Region**

Ethnicity	Overall Population	% Population	Poverty Level	% Poverty Level
Hispanic or Latino origin (of any race)	26,498	11.3%	4,879	18.4%
Non-Hispanic or Latino origin (of any race)	207,217	88.7%	30,130	14.5%
<b>Race</b>				
White alone	180,141	77.1%	20,149	11.2%
Black or African American alone	24,940	10.7%	8,947	35.9%
American Indian and Alaska Native/Native Hawaiian and Other Pacific Islander	896	0.4%	179	20.0%
Asian alone	7,689	3.3%	1,058	13.8%
Two or more races	14,460	6.2%	3,618	25.0%
<b>Total</b>	<b>233,715</b>		<b>35,009</b>	<b>15.0%</b>

Source: 2021 ACS 5-year estimates; East Moline IL, Moline IL, Rock Island IL, Bettendorf IA, Davenport IA. Total population sums to 233,715. The racial categories sum to 228,126 due to race alone and two or more race categories being included and excluding three or four or more races included.

To support the goals of IBHE and the *Thriving Illinois* plan to ensure equitable access to economic opportunity in the region for all residents, including underrepresented individuals and communities, WestEd analyzed completion patterns by gender and by race, ethnicity, and non-

resident alien<sup>6</sup> status for the five occupational clusters in the workforce supply and demand analysis. Data is included in the detailed tables if there were completers, but categories with zero completions were not included. The intent of this analysis is to identify patterns in completion of programs in which the selected groups were underrepresented, with two goals:

1. Identify equity gaps that should be addressed as a part of the plan in Quad Cities to take steps to improve equitable access to economic opportunity for all residents.
2. Identify underrepresented subpopulations that could be engaged as a source of new students to address undersupply in key occupations and industries.

Findings from the analysis show that **equity gaps exist in completion rates for high-wage occupations** in the Quad Cities. Analysis of occupational clusters within the top five “industry” sectors indicates disproportionate impact among completion rates for higher-wage occupations across gender, race, and ethnicity.

**Gender:** Completion by gender in several cases was strongly aligned to traditional gender stereotypes related to specific types of work, although there were outliers related to specific occupations:

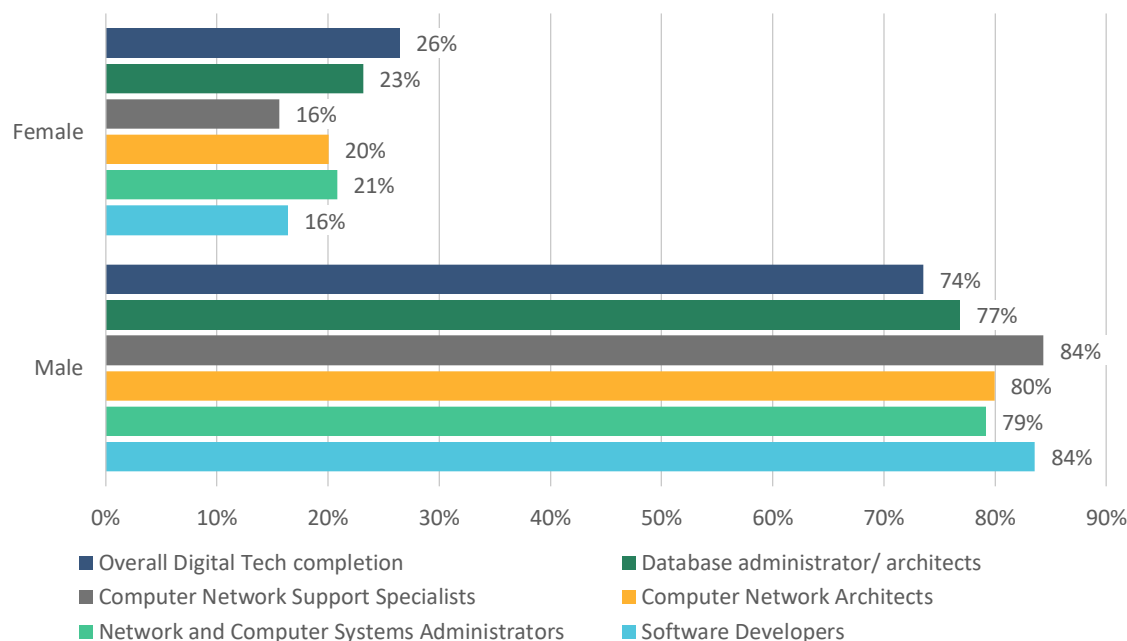
- **Health Care:** 83 percent of health care completions were by females, with more than 90 percent of completions in programs for licensed practical nurses (LPNs), registered nurses, and nursing assistants also being by females.
- **Manufacturing:** 90 percent of manufacturing completers were male and 85 percent of those completing architectural or engineering manager programs were also male.
- **Transportation:** Overall completers were 82 percent male, although 43 percent of completers in logistics (logisticians) were female.
- **Digital Technology:** 74 percent of completers in digital technology were male with even higher concentrations of male completers in programs for computer network specialists (84 percent) and software developers (84 percent). Figure 7 below illustrate these gender gaps and offer examples of the equity data found later in the report in the *Occupational Cluster Analyses* starting on page 56.
- **Business and Management:** Only business and management exhibited overall balance, with 49 percent of completions by females and 51 percent by males. The only exception to this pattern was programs for administrative assistants, with 99 percent of completers being female.

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<sup>6</sup> Non-resident alien in a term used in IPEDs and defined as a person who is not a citizen or national of the United States and who is in the country on a visa or temporary basis and does not have the right to remain indefinitely.

**Figure 7. Sample Completion by Gender and Largest Occupations in Digital Technology**

See additional equity findings in the Occupational Cluster Analyses section.

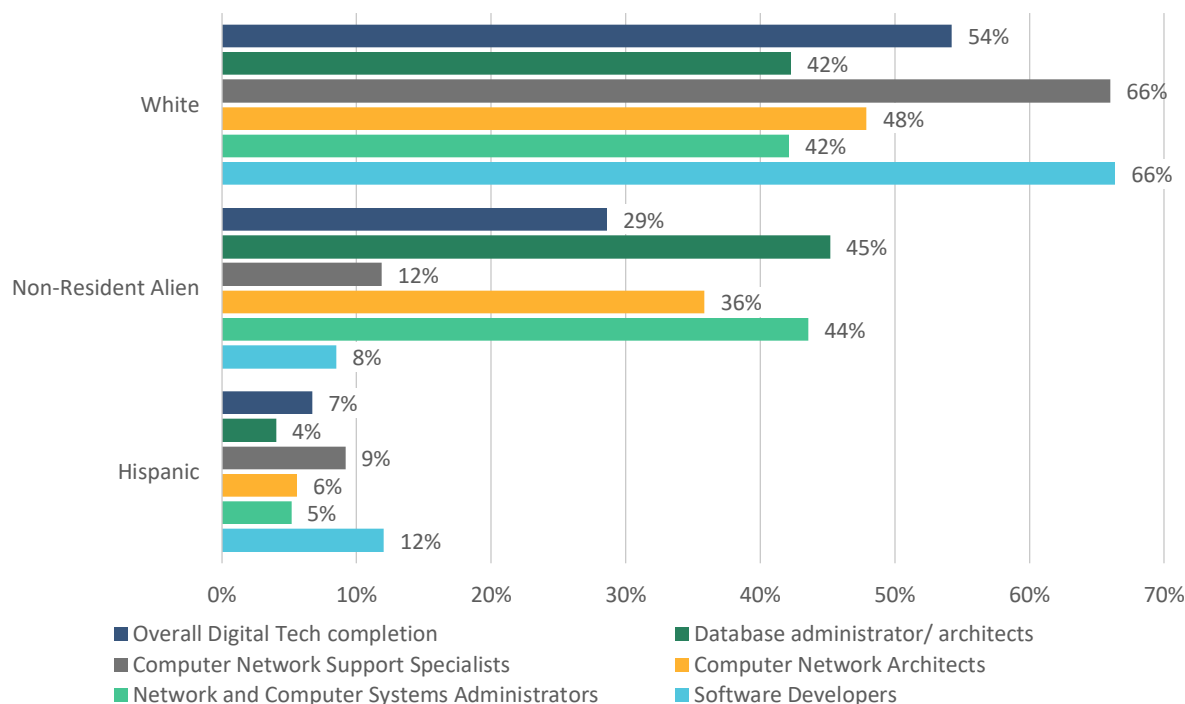


Based on this data, there are multiple places where the Quad Cities could focus to address gender imbalance where there is a significant undersupply of workers, such as in health care, manufacturing, or digital technology (as shown in Figure 7). There is significant focus within the Department of Labor as well as many state labor agencies on nontraditional occupations both for males in occupations traditionally associated with health and personal care, such as nursing, and for females in manufacturing as well as digital technology.

**Race/Ethnicity:** In all five occupational clusters, White residents were overwhelmingly the largest percentage of completers. Given that 77 percent of Quad Cities residents are White, this is not surprising. However, there were significant differences in completions by occupation; in particular, there were higher concentrations of Black/African American and Hispanic/Latino completers in lower-wage or less prestigious occupations. For example, more than 20 percent of LPN and vocational nursing completers were Black/African American; however, they constituted less than 10 percent of completers in registered nursing.

**Figure 8. Sample Completion by Race, Ethnicity, Non-resident Status, and Largest Occupations in Digital Technology**

See additional equity findings in the Occupational Cluster Analyses section.



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds). “Non-resident Alien” is a term used in IPEDS.

- Health Care:** In health care completions, Black/African American and Hispanic/Latino completers are overrepresented compared with their percentage of the population in the Quad Cities as LPNs and nursing assistants and underrepresented as percentages in completions for registered nurses. White students account for 70 percent of all health care completions and approximately 78 percent of completions for registered nurses.
- Manufacturing:** Like health care, Black/African American and Hispanic/Latino completers account for less than 10 percent of completers overall in most manufacturing occupations, especially architectural and engineering managers. Unlike in health care, there were no manufacturing occupations in which either group had a significant percentage of completers, and Native Americans and Pacific Islanders were not statistically significant enough to be identified in the analysis.
- Transportation:** Hispanic/Latino and Black/African American individuals each accounted for about 10 percent of completers in transportation, within a percentage point

of their percentage of the regional population (Black/African Americans: 10.7 percent; Hispanics: 11.3 percent). Black/African Americans accounted for approximately 18 percent of light truck drivers and 18 percent of tractor-trailer truck drivers; however, both Hispanics/Latinos and Black/African Americans accounted for less than 10 percent of logisticians. Asian completers were approximately 5 percent of all transportation completers.

- **Digital Technology:** Figure 8 illustrates these gaps and provides a preview to what is found later in the *Occupational Cluster Analyses* section of the report (page 56). Of non-White completers, no racial/ethnic groups accounted for a statistically significant percentage to count in the analysis of digital technology completers except for Hispanics, who accounted for approximately 7 percent of overall digital technology completers and approximately 5 percent of completers in database architecture, network architecture, and computer systems administrators. Hispanics accounted for approximately 12 percent of software developers. Digital technology completions are skewed by the large percentages of non-resident alien students completing credentials in this cluster.
- **Business and Management:** Similar to other clusters, Hispanics/Latinos and Black/African Americans register between 5 and 10 percent of completions, depending on the specific occupation. Other groups all account for less than 5 percent each for completions, except for White students, who account for just over 70 percent of completions.

The data collected on race and ethnicity completion underscores the racial and ethnic divisions in access and success in critical parts of the Quad Cities and Illinois economy, particularly in manufacturing, digital technology, and management occupations, although underrepresentation of non-White racial groups is prevalent across all the clusters. Underrepresented populations in critical and undersupplied occupations can be a vital resource to help strengthen the pipeline of talent by better engaging these populations, as in manufacturing and information technology, where the presence of Black/African Americans and other groups is not statistically significant enough to measure. Where racial or ethnic groups are underrepresented in some occupations but overrepresented in other occupations in the same cluster, that can be an opportunity to focus on upskilling incumbent workers, such as nursing assistants and vocational or practical vocational nurses, into more skilled occupations, such as registered nurses.



### III. Recommendations

As the IBHE seeks to be responsive to the Quad Cities' education, training, and economic needs, it can support cross-segmental improvements in education and workforce development through a set of actionable strategies aimed at fostering equitable career opportunities for the region. Based on the synthesis of findings, the recommendations that follow suggest multiple strategies designed to better align the education-to-employment pipeline, with a strong emphasis on inclusivity and community collaboration. Each approach is intended to meet the needs of the region's diverse population, with a charge to focus on supporting disproportionately impacted or traditionally underrepresented groups in the region and pave the way for a more prosperous and equitable Quad Cities.

#### Preparing and Supporting the Workforce

**Create cohesive career awareness activities and campaigns in K–12 aligned with regional economy needs:** To respond to a need for increased regional education and career awareness, adopt a cross-segment approach to build campaigns about high-wage, high-demand careers in the Quad Cities. Key interest groups expressed a need for widespread and cohesive career awareness activities in regional K–12 schools. A comprehensive and equitable approach to developmentally appropriate career awareness activities in regional middle and high schools means adopting a cross-segment approach. Outreach and engagement about local high-demand career paths entail targeted communication about existing career-focused engagement with middle and high school students and families. Outreach and engagement also require flexible scheduling for a range of career explorations and experiential learning to allow all students the chance to participate and learn about pathways. Some strategies that Quad Cities leaders shared included leveraging job-shadowing opportunities and resources, widely introducing career inventories and search tools in middle and high school and conducting more targeted outreach to students and families. Involvement with industry leaders is also essential. This means encouraging and incentivizing industry to participate in ongoing and deep engagement, beyond simple one-time job fair appearances. Instead, industry professionals can be involved by tapping into their expertise in a sustained way to communicate skill needs and requirements and to work creatively with educators to provide career activities that involve hands-on exploration.

**Further develop K–12 student pipelines to address gaps and support success into in-demand occupations:** Expanding the pipeline of students to in-demand occupations require improving matriculation rates and postsecondary readiness within the Quad Cities (see page 93). Improving matriculation can be partially accomplished through the region's K–12 system,

although it is not the exclusive lever of change. Quad Cities' postsecondary institutions should also be involved by improving accessibility and affordability while developing robust partnerships with K–12 institutions. Accessibility is inclusive of offering in-demand programs so that students can reach their educational goals locally. Improving postsecondary readiness, particularly in mathematics, is necessary for addressing training gaps that require strong quantitative reasoning skills that are foundational for engineering and computer and information science pathways and careers.

**Expand opportunities for K–12 teachers to secure certification for dual credit and English language learner (ELL) certification:** Examining ways to remove barriers for teachers to become dual credit certified might open opportunities in education pathways to address K–12 teacher training needs, especially given that the experience was described as involving a significant amount of cost and red tape in Illinois. One way to do so might be by working with the Illinois State Board of Education (ISBE) to find ways to simplify the educator licensure process and reduce costs. Removing this barrier and having more teachers in the region who can teach these courses will allow more K–12 and higher education connections and smoother transitions for postsecondary-bound high school students. Similarly, increasing the cadre of ELL teachers in the region will produce benefits for nonnative English speakers including higher educational achievement, increased job opportunities, and access to support and resources in the community. Together, these certifications and credentials can contribute to improved pathways and economic success in the region.

**Expand 2+2 programming options:** Programs called “2+2” combine two years of community college with two years of university for the completion of a traditional bachelor's degree. No public university is present in the Iowa portion of the Quad Cities, making transfer students reliant on Western Illinois University-Quad Cities (WIU-Quad Cities), private institutions, or transferring to other areas of Iowa to complete a bachelor's degree. Eastern Iowa Community College (EICC) and WIU-Quad Cities do have 2+2 agreements in place, though agreements are limited to business and public health programs. The narrow number of articulated transfer agreements between EICC and WIU-Quad Cities could impede students from continuing their education within the Quad Cities, contributing to drain of human capital.

**Increase work-based learning and apprenticeship opportunities:** Work-based learning (WBL) can be used as a powerful driver for workforce development and economic growth. As a strategy, it bridges the gaps between education and employment, providing individuals with real-world experiences and skills directly aligned with industry needs. The successful implementation of WBL programming in the Quad Cities requires building dynamic relationships between K–12 educators, higher education leadership, and regional employers. To do so, it is necessary to break down existing silos and provide opportunities for partnership and knowledge sharing.

Expanding current WBL efforts also ensures that current and future employees can be prepared to meet the regional labor market's evolving demands, respond in ways that enhance individual career prospects, and contribute to the region's overall economic strength. It is also necessary to expand regional efforts in ways that connect students in both K–12 and higher education programs to employer and WBL opportunities. Some proposed ideas include the following:

- Explore creating a regional WBL repository or tool like the ISBE's [Work-Based Learning Employer CTE Database](#). This tool allows employers to enter WBL opportunities, indicating the local school districts in proximity to their business and the career clusters that pertain to the WBL experience.
- Work with local community-based organizations (CBOs) such as the Safer Foundation, Goodwill of the Quad Cities, United Way, and Project Now. CBOs can serve as brokers between the families they serve and industry leaders offering experiential learning and WBL opportunities, especially for low-income and traditionally underserved populations. Reaching and connecting underserved populations, for example, through community brokers might lead to paid internships or part-time work that can be transformational in these individuals' career paths.
- Seek additional state and federal funding for apprenticeships or program development along with available intermediary support to facilitate understanding about those opportunities. For example, federal grants are available through the Department of Labor—such as the Strengthening Community Colleges Training Grants (SCCTG) program—that can help develop or pilot training programs either at a single community college or across a consortium of colleges. See Appendix C for more detail on available state and federal funding.

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## **Manufacturing WBL Partnership in Action: IGNITE Program**

The **IGNITE Program**, launched by Black Hawk College (BHC) in 2022, is a pioneering micro-credentialing and pre-apprenticeship initiative to introduce high school and adult learners to Advanced Manufacturing and Industry 4.0 skills through hands-on career exploration and learning. In collaboration with Deere & Company, IGNITE provides foundational knowledge and practical experience in various manufacturing skills and specialties, effectively linking local businesses with skilled candidates for full-time employment. Participants in the program receive a detailed career plan tailored to their interests, allowing them to explore various pathways within the manufacturing industry. This initiative is supported by the Quad Cities Chamber and developed in partnership with the Department of Defense and Amatrol, exemplifying a true cross-segmental collaboration that bridges higher education, industry, and the community.

In an interview about the program published by the [Quad Cities Chamber](#), David Ottavianelli

of Deere & Company remarked that IGNITE is “a community-wide effort involving multiple businesses, making this a sustainable initiative that fills the pipeline we have struggled to fill in the past. This sustainable pipeline will benefit all businesses in the Quad Cities and could catalyze future growth.” The IGNITE program became a reality for Black Hawk through additional funding secured by Safer Foundation, a community-based organization, as part of its Department of Labor, I-MATTER Young Adult Reentry Partnership. Safer and I-MATTER work to support justice-impacted individuals in gaining skills or upskilling in jobs that are not only in demand regionally but also offer high wages.

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**Increase meaningful connections among employers and education partners to support student success:** Increasing engagement with employers and building meaningful connections among employers and educational partners strengthens opportunities for students’ success in career pathways and opens access WBL or job placements. Expand the role of intermediaries or develop a career navigator program to coordinate connections. Intermediaries or career navigators can help to support flexible accelerated learning models and credit for prior learning assessments to support students in navigating pathways and impact career opportunities and trajectories, especially for traditionally underserved populations.

- **Expand the role of intermediaries to meaningfully connect industry and help transition students to higher education placements:** Intermediaries play a powerful role in connecting industry and higher education students to opportunities through formation of **regional industry sector partnerships**. These partnerships play a vital role in bridging the gap between educators and employers, supporting increase in the availability of WBL, job placement, and co-design of new and improved career pathway programs. Workforce intermediaries can coordinate across interest groups to both design and implement training programs in the region or provide warm handoffs that help students navigate open positions aligned to educational training. Such partnerships are designed to cultivate and activate industry leadership in ways that focus on strategies to drive industry success and to address multiple employer and industry issues (e.g., addressing shortages in the regional talent pipeline). Although time intensive, cultivating employer leadership in this way creates much more enduring partnerships that can address the needs of communities, educational providers, and the regional economy. Resources such as the [National Fund for Workforce Solutions’ industry partnerships toolkit](#) and the [Next Generation Sector’s Training Manual and toolkit](#) offer more information about industry driven sector partnerships. Quad Cities has multiple viable options to expand the role of existing intermediaries including the Quad Cities Chamber of Commerce and Workforce Investment Boards such as the Mississippi Valley Workforce Investment Board and American Jobs Center—Rock Island. Ideally,

these intermediaries have the support and funding needed to play pivotal roles in building industry connections, documenting employer demand for a skilled labor force, and serving as liaisons between students and employers.

- **Train and support a regional career navigator program:** Career navigators are another type of intermediary that can help facilitate education and economic development. Creating a training program to develop a cadre of navigators for the region can result in bridging opportunities for adult learners and the workforce, educational institutions, and programming. For example, navigators offer personalized guidance to help adult learners navigate the complexities of career planning, job training, and educational opportunities that align with regional labor market demands. This guidance in turn can help ensure that the skills learners acquire are relevant and in demand, thereby increasing their employability. Additionally, a regional career navigator program can be another way to foster partnerships with local employers, leading to potential job placements. Working in a case-based way and providing continuous support, these programs not only help adult learners secure employment but also help them plan for long-term career growth that contributes to regional economic development.
- **Create flexible and accelerated learning models:** Create flexible and accelerated learning models by increasing the quantity and expanding the models of education and training programs at the two-year level to include accelerated learning and earn-while-you-learn opportunities through apprenticeships and leveraging paid work experience incentives in the workforce system. The ability to maintain full-time employment while attending training programs is a motivating factor for adult learners and an increasing worker preference. Flexible scheduling and accelerated upskilling will also appeal to the employers who offer tuition subsidies and may encourage the use of these worker benefits. Clear and concise educational pathway mapping that is regularly shared with employers and human resource professionals will support adult learners who seek to begin a living wage career path or upskill from their current position. Assessment of current postsecondary education and training options in the region revealed a lack of short-term, flexible options that are suitable for full-time adult learner-workers.
- **Expand Grad Center consortium model to fill local workforce gaps:** The Grad Center in the Quad Cities is funded by IBHE and links students and adults in the community to graduate programs, certificate programs, and professional update courses geared toward working professionals. Housed on the WIU-Quad Cities campus, the current role of the Grad Center is largely as a connector to inform students of educational opportunities. Opportunity exists to greatly expand the role of the Grad Center to connect adults to programming related to workforce demands in the region.

See more about opportunities to grow this consortium model below in *Innovative Higher Education Model Serving Local Workforce Needs*.

- **Attract local learners with Credit for Prior Learning (CPL) or Prior Learning Assessment (PLA) programs:** These programs are recommended to attract students already working within the sector and from historically underserved populations into pathways that offer increased opportunity for economic mobility through career trajectories such as pre-engineering, health sciences, and management and business administration. Assessment of available postsecondary programs did not identify any CPL/PLA programming available in the region.

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## **Innovative Higher Education Model Serving Local Workforce Needs**

The University Center of Lake County is an IBHE-funded consortium model of higher education programming tailored to meet the workforce demands of its region in northern Illinois. Courses, programs, and degrees are offered locally in Lake County through institutions throughout the state to students with flexibility and accessibility. Appealing to adult workers, a variety of delivery formats are offered including evenings or weekends; face-to-face, online, or hybrid. Not only do learners in the region gain access to programs offered elsewhere, counselors and career supports are offered, and the model is independent from any one higher education institution. The Center works in collaboration with Lake County industry partners and is led by a governance team equipped with comprehensive labor market information, student data, and job projections, offering programs geared toward the creation of a sustainable educational pipeline. Dr. Myra Gaytan, Executive Director, explained that the University Center is successful in cultivating trust with students and adult learners in the community, particularly among first-generation and traditionally underserved populations.

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**Support wraparound services to allow employees to get to work and stay at work:** As part of a thriving regional workforce, wraparound services help potential job seekers and current workers navigate career trajectories. Examples of some needed wraparound services include supporting families with young children who lack adequate options in childcare and providing transportation support. For instance, the region can leverage resources from CBO's and local funding sources to provide supports to workers using public transit, especially those crossing the bi-state area, such as bus passes, enhance bus services, or develop alternative transportation options. The region can work to develop a comprehensive support strategy that leverages the advantages of wraparound service providers, partnerships, and support needed by workers. This strategy can also function as a valuable resource to enhance outreach initiatives by establishing links to resources and addressing the specific requirements of the



targeted populations. See Appendix D for more detail on available wraparound services and CBO partners in the region.

## **Higher Education and Training Programs Fill Needs and Gaps**

**Expand, fund, and develop additional occupational training programs tailored to address gaps among available sector jobs and postsecondary supply.** WestEd's review of the postsecondary programs with a workforce shortage revealed multiple gaps in available jobs and available workers stemming from postsecondary program completion. Variance within those gaps sometimes exists due to uncontrollable or confounding factors, such as inbound and outbound migration patterns and vacillations in the labor force participation rate. Tailoring funding to expand program offerings, leveraging existing programs, or developing new programs can better track education programming and workforce needs. Recommendations to address workforce gaps in the Quad Cities' priority sectors include the following:

**Health Care** – In the Quad Cities, there are more completions in health programs than there are job openings, though most openings are for low-wage occupations including **home health aide, certified nursing assistant, and medical assistant**. While these pathways are relevant and in high-demand, academic pathway planning should be transparent with access to latticed credentials and continued education for the completers in these low-wage programs. Some of these completions can be attributed to the region's chiropractic school (600 completions) and are thus specialized to that field. There is a need within **health and medical administrative services**, although the labor supply from postsecondary completion data does not consider factors that could be influencing the gap, such as out-migration or qualifying board passing rates. Additionally, **nursing** remains a high-demand occupation and while completions for registered nursing demonstrate an adequate supply, it is recommended that leaders maintain a close eye on job openings and hires in this occupation, given the continual demand for these services projected into the future. The Bachelor of Science in Nursing (BSN) degree completions fall short of talent needs across the region. This can be alleviated by the institution of RN to BSN programs. Assessment of current academic programming in this field revealed that the online RN to BSN program at WIU has been placed on hold.

**Manufacturing** – The data show that multiple gaps exist in manufacturing programming for jobs available to completers, many of which corroborate what key interest groups discussed during conversations. For example, **engineering** is a high-demand field across mechanical and electrical engineering, with 237 job openings but only 71 completions in the three-year average. Black Hawk College (BHC) currently offers three associate of applied science (AAS) degrees in this field, including electrical, mechanical, and manufacturing tracks. Enhancing transitions, and further access, from community college pre-engineering programs into university programs will

contribute to the building of this talent pipeline and provide an equitable on-ramp to university enrollment for historically marginalized populations. To do this, these AAS programs should have an automatic transfer agreement to WIU to increase access and remove barriers to continued education. Additionally, supporting college readiness for high school graduates, particularly rigor in mathematics course offerings, will prepare them for programs in high-demand pathways such as engineering and computer and information sciences.

- **Machinists** are needed in the region, reflecting the high demand for this skill set across the country and the widening gap between demand and supply for this type of talent. Black Hawk College (BHC) currently runs computer numerical control (CNC) production operator and CNC production machinist programs, which provide entry-to-midlevel skills for CNC operators and programmers and are requirements for the CNC Production Machinist Certificate. These programs can be pathways into formal machinist programs or remain stand-alone. Becoming a professional machinist requires years of on-the-job training in addition to scholastic work. For this reason, machining apprenticeships are one of the most popular and effective methods for building talent in this field. The Department of Labor now allows for an educational institution to serve as a registered apprenticeship “sponsor,” allowing for added connectivity between employers and education to provide the Related Supplementary Instruction (RSI) and increased support for the administrative tasks for which the employers may not have the bandwidth. CNC machine operators and programmers are in high-demand and can be part of the career trajectory into a full machinist career.
- Within the manufacturing sector, there is a bright spot in the area of **welding**, with a high number of completions of community college programs (which typically include American Welding Society [AWS] industry credentials) and a regional program from John Deere that supports student pipelines into welding and the attainment of AWS credentials prior to community college. Expanding successful models like these to the Production Machinist Certificate at BHC and having BHC engage as a registered apprenticeship sponsor for electrical, mechanical, and mechatronic technicians can better help align industry and education pathways while providing an earn-while-you-learn opportunity for students and adult learners. Technician training and CNC operator/programmer certificates at the community college, along with classes that focus on computer-aided drafting, such as AutoCAD and SolidWorks, are entry-level pathways to pre-engineering and engineering programs.
- In the highest paying fields within the architectural and engineering management cluster, Black/African American and Hispanic/Latino students demonstrate a lower level of completion than their White counterparts. This indicates that the student population may require additional supports to increase access and attainment of higher degree



credentials that lead to living wages. Student focus groups are suggested to better identify the exact supports needed by this student body.

**Transportation/Logistics/Wholesale Trade** – Transportation/warehousing, logistics, and wholesale trade are key sectors in the Quad Cities, with the area’s colleges and universities working to meet needs. Eastern Iowa Community College and WIU, for example, have programs in the area, and the data shows that logistics, materials, and supply chain management are meeting the margin of supply needs. That said, given the substantial projected growth for these sectors, increasing awareness about the WIU supply chain management credential, and offering the full supply chain management bachelor’s degree at the Quad Cities campus would prepare the region for the emerging demand and ensure that talent needs do not obstruct the growth in these sectors. The Association for Supply Chain Management and the Manufacturing Skills Standards Council both offer short-term industry validated credentials in the field that may be overlaid in community college or university programming to rapidly upskill both incumbent and new workers. These credentials were absent from the program and catalogue descriptions for this field of study. **Commercial driver’s license (CDL) drivers** to fulfill the demand for trucking could be bolstered, particularly for transitions from class B to class A licensure in training programs and postsecondary institutions that offer them, given the age requirements. The [Illinois Secretary of State regulates CDL attainment](#), and the majority of community colleges have offered this training through their noncredit programs and CDL training is typically on the state Eligible Training Provider List (ETPL). In the region, there are three CDL training programs that are approved to receive Workforce Innovation and Opportunity Act (WIOA) funding. However, the data sets used in the study are missing data from private training companies and thus do not paint the full picture for supply of CDL completions in the region. See additional information about funding for CDL programs in the region on page 114.

**Information Technology** – Digital technology sits in a unique, crosscutting space. It is an occupational cluster that is critical to operations across numerous industry sectors, including priority sectors, since it provides a supporting role. Furthermore, information technology credentials are highly recognized, so it is imperative that credentials such as certification through the Computing Technology Industry Association (CompTIA) are overlaid in the classroom at the community college and university levels. While BHC offers Network + and A+ credentials, the college is not offering Security + and Data Analytics +, both of which would provide the talent needed for the region and offer access to nondegree skills building. The university system also does not demonstrate an investment in CompTIA industry credentials that are in high demand. In general, there are significant shortages within IT, particularly for **general computer and information sciences**, which should contain a variety of latticed credentials that provide learners with the broad knowledge base needed in the field (i.e., integrated knowledge of networking, cybersecurity, programming). Across the Quad Cities’

universities, there is a breadth of computer and information sciences programs offered where students can earn a bachelor's degree, although WIU-Quad Cities only offers a Bachelor of Science in information sciences.

- **WIU-Quad Cities should pursue the development of additional programs in computer and information sciences.** The development of these programs is important for the economic development of the Quad Cities and provides a pathway for residents to pursue high-wage careers within the region's public education system. Dual enrollment and short-term community college credentials that are skills supplements will support a student in building the collection of skills employers are seeking, such as cloud computing, social media marketing and YouTube credentials, Microsoft Azure and Power BI, and Microsoft Excel. Finally, supporting college readiness for high school graduates, particularly in mathematics and coding course offerings, will prepare them for programs in high-demand pathways in computer and information sciences. With all these strategies, it is important to adopt flexible and nimble curriculum and practices to remain competitive and current with new technology and to provide avenues for continued learning.
- **Data scientists and computer information systems security (i.e., cybersecurity) programs especially need to be built, and existing programs need to be strengthened.** Both occupational fields support all sectors in the region and thus are in high demand, particularly as digital data is increasingly available and digital threats grow daily. In today's environment, cybersecurity is of utmost importance, with small to large companies needing specialists from the field. Once developed, however, these programs will also need to build student awareness for outreach and recruitment. These programs can be entry-level through dual enrollment or community college certificates and full bachelor's degree programs. It is also important to remain mindful that most industries, including manufacturing, construction, health care, and warehousing and wholesale trade, require a baseline competency in Microsoft Office, particularly Excel, Outlook, and Word. These proprietary industry credentials through CompTIA and Microsoft may be offered in programs pertaining to those industry sectors or as an à la carte option via noncredit instruction that is nonetheless included as a part of the pathway.

**Business and Management** – While there are gaps within business and management, shortages may not be as big as they look, and universities are working to meet needs. For example, business is the largest program, with data showing more than 2,200 available jobs regionally and more than 600 completions. However, jobs within the field, such as business administration, are often learned in place; thus, gaps that exist can be filled with on-the-job training. Where programming for business and management may be further developed is

training in students' durable skills (e.g., critical thinking, communication, initiative). Key interest holders noted, for example, the necessity to have skills in Microsoft Office tools, but also noted that many entry-level or trade jobs do not offer enough opportunities for employees to grow their skills. Interest holders further observed that they seek employees who could show up on time, communicate with clientele, and be trustworthy.

## **IV. Economic, Workforce, and Education Analysis**

Demand for labor originates from a variety of factors, most prominently current and projected demand for goods and services. While demand for goods and services can be difficult to project, the U.S. Bureau of Labor Statistics (U.S. BLS) uses a variety of survey mechanisms to measure employment levels and trends. In order to capture labor demand trends and projections for future labor needs, the U.S. BLS conducts three monthly surveys: (a) the Job Openings and Labor Turnover Survey (JOLTS), demonstrating job openings, separations, and hires; (b) the Current Employment Statistics (CES) survey, designed to measure employment, hours, and earnings; and (c) the Current Population Survey (CPS), designed to measure the labor force status of the civilian noninstitutional population with demographic detail.

The monthly results of these surveys contribute to annual projections that help gauge labor demand down to the 6-digit occupational code. Employment projections can also help inform labor demand by showing how the labor force is expected to change over time. These projections can be short-term, medium-term, or long-term, and are revised annually. They can help people understand how factors like demographics, technology, and consumer preferences are expected to impact the future labor force. This information can be useful for job seekers, career counselors, students, workers, employers, researchers, and policymakers. For example, projections can help people see where the strongest or weakest growth is expected to be in a particular occupation or industry. They can also help people understand how the demand for certain skills may increase or decrease over time.

The following analysis applies five evidence-based metrics to determine demand for the labor in the Quad Cities region: average annual job openings, average annual hires, five years past occupational growth, five years projected occupational growth, and employment concentration.

The analysis begins by identifying the highest-producing industry sectors in the Quad Cities region measured by gross regional product, defined as the summation wages, taxes on production and imports, and profits less subsidies. This is cross-referenced with occupational data to better delineate the contextual frame of employment needs, as occupational clusters can often relate to multiple industry sectors (e.g., installation, maintenance, and repair jobs are involved in the manufacturing, agriculture, and construction sectors). Based on these findings, the analysis then moves into five deep sector dives using the related occupational clusters provided in O\*NET.

## Local Workforce Context and Demographic Profile

The following workforce and local demographic information are provided to ensure that economic and labor market data are couched in the regional context.

### Summary of the Local Workforce System

Because the public workforce system in the Quad Cities crosses state lines and is overseen by state agencies from two different states that are responsible for the Workforce Innovation and Opportunity Act (WIOA), there is limited coordination between the activities of the two local workforce centers. The programs that are supported through WIOA funds address both employer and job seeker needs but function using different policies and offer unique programming that may provide varying types and levels of services (see Appendix B for additional context and details on specific services offered by each workforce center).

This bifurcated system means that employers and training entities, including community colleges and four-year institutions, often must develop two separate structures to work with these entities. This is one reason for the often-cited need for some type of intermediary to coordinate services available to local businesses. This dual system can also be an impediment for community colleges and four-year institutions to engage with the workforce system to access funds from the system to provide training for job seekers and employers.

The bi-state entity that has often been able to bridge the divide between the workforce activities in both states is the Quad Cities Chamber of Commerce. Unlike many chambers, the Quad Cities Chamber is not just a membership organization focusing on supporting the interests of its members through networking, marketing, and advocacy. The Quad Cities Chamber has the mission to create a prosperous regional economy that attracts investment and jobs. In fact, the Quad Cities Chamber identifies workforce and talent development as a key program area. Future activity identified in the recommendations of this project would benefit from including the Quad Cities Chamber as a lead partner because of its ability to engage both employers and educational institutions from both states.

### Demographic Profile of the Quad Cities

Figure 9 below displays population and poverty by race and ethnicity to support analysis about postsecondary completions and equity. Completions for equity analysis have been cross-referenced against population and poverty proportions. Table 2 displays population and poverty level for the five cities that compose the Quad Cities area. Disparities are highlighted and used as a reference when analyzing completion by race and ethnicity.

Figure 9. Poverty by Race in the Quad Cities Region

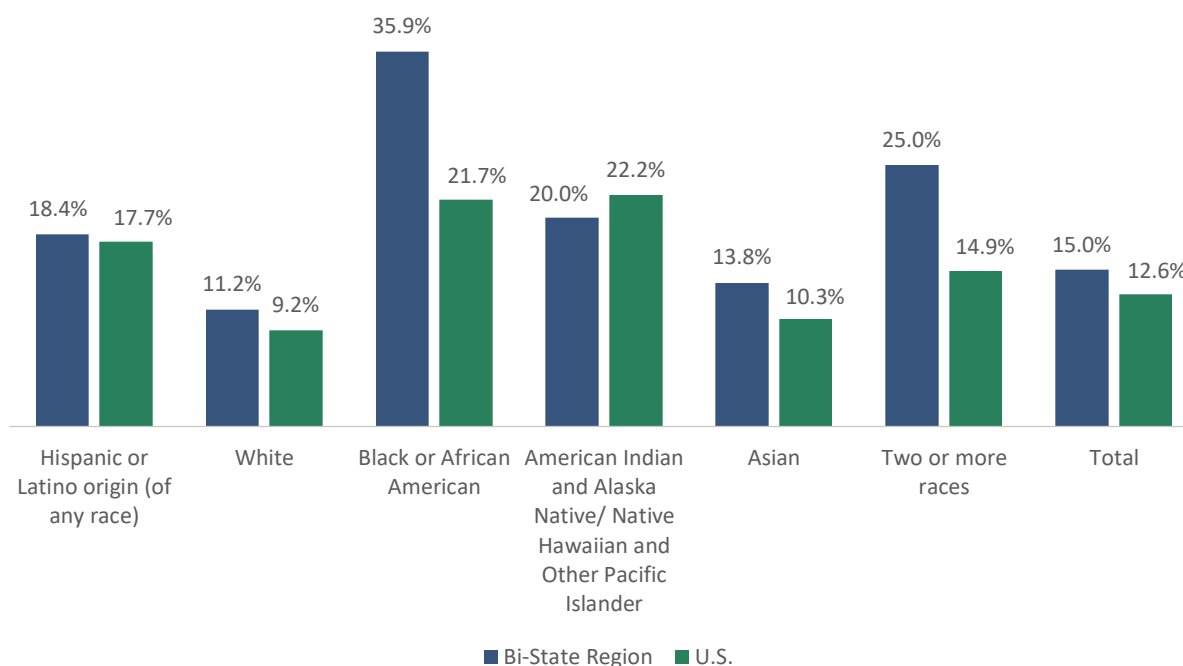


Table 2. Aggregate Population and Poverty Data for Quad Cities Region

Ethnicity	Overall Population	% Population	Poverty Level	% Poverty Level
Hispanic or Latino origin (of any race)	26,498	11.3%	4,879	18.4%
Non-Hispanic or Latino origin (of any race)	207,217	88.7%	30,130	14.5%
Race				
White alone	180,141	77.1%	20,149	11.2%
Black or African American alone	24,940	10.7%	8,947	35.9%
American Indian and Alaska Native/Native Hawaiian and Other Pacific Islander	896	0.4%	179	20.0%

Ethnicity	Overall Population	% Population	Poverty Level	% Poverty Level
Asian alone	7,689	3.3%	1,058	13.8%
Two or more races	14,460	6.2%	3,618	25.0%
<b>Total</b>	<b>233,715</b>		<b>35,009</b>	<b>15.0%</b>

Source: U.S. Census, American Community Survey 2021, 5-year estimates, East Moline, Moline, and Rock Island, Illinois, and Bettendorf and Davenport, Iowa.

Following the industry and occupational analysis in this section, the sector and occupational cluster deep dives conclude with an equity gap analysis for completions in corresponding academic programs. Disproportionate impact for completions is identified by correlating poverty level with race and ethnicity.

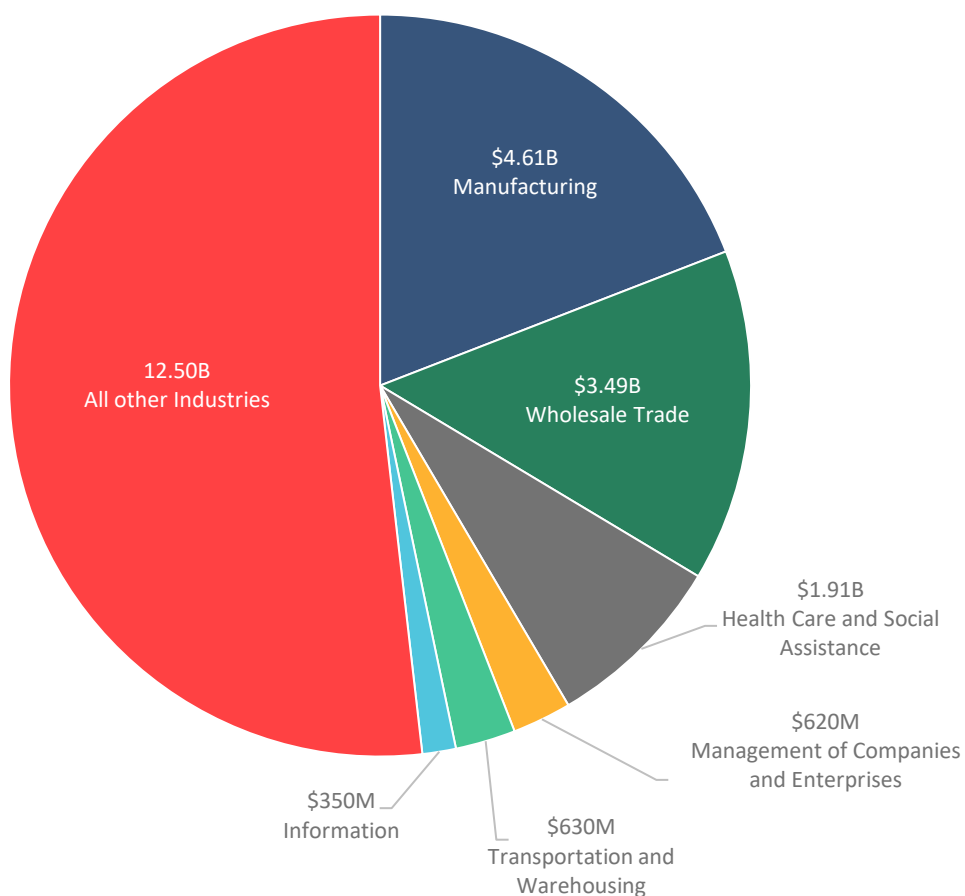
## Economic and Occupational Demand Analysis

### Industry Trends

The gross regional product (GRP) is a localized proxy for gross domestic product (GDP), inclusive of the sum of total industry earnings, taxes on production and imports, and profits less subsidies. According to the U.S. Bureau of Labor Statistics, the economy of the Quad Cities region is heavily dependent on manufacturing and wholesale trade, transportation, and warehousing, contributing \$4.6B and \$4.1B (including wholesale trade, warehousing and transportation) to the GRP in 2022, as shown in Figure 10. Each is projected to grow by 7 percent and 15 percent, respectively, by 2029 (see Figure 11). Finance and insurance at \$1.4B GRP, health care at \$1.9B, government at \$2.7B, and construction at \$1.2B are the next highest economic contributors to the region that offer living wages, with industry growth projections at 6 percent for health care, while the remaining sectors are expected to remain steady at 0 percent growth.

Figure 10 displays the GRP for the four-county region encompassing the Quad Cities area at a two-digit North American Industry Classification System (NAICS) code level.

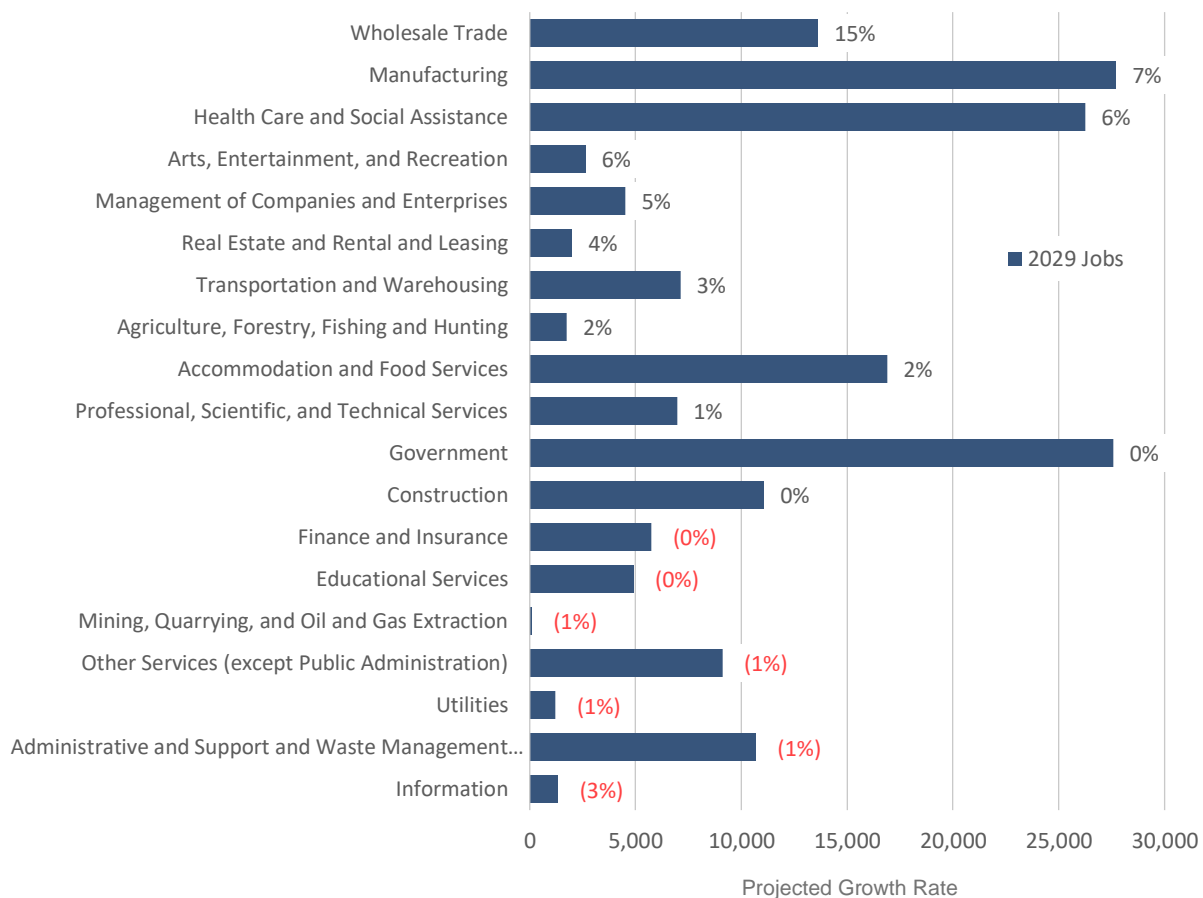
**Figure 10. 2022 Quad Cities Region Gross Regional Product by Sector**



Sources: U.S. Bureau of Labor Statistics, Lightcast; industries displayed by two-digit NAICS code.



**Figure 11. 2029 Projected Employment by Sector and Projected Growth Rate**



Sources: U.S. Bureau of Labor Statistics, Lightcast; industries displayed by two-digit NAICS code.

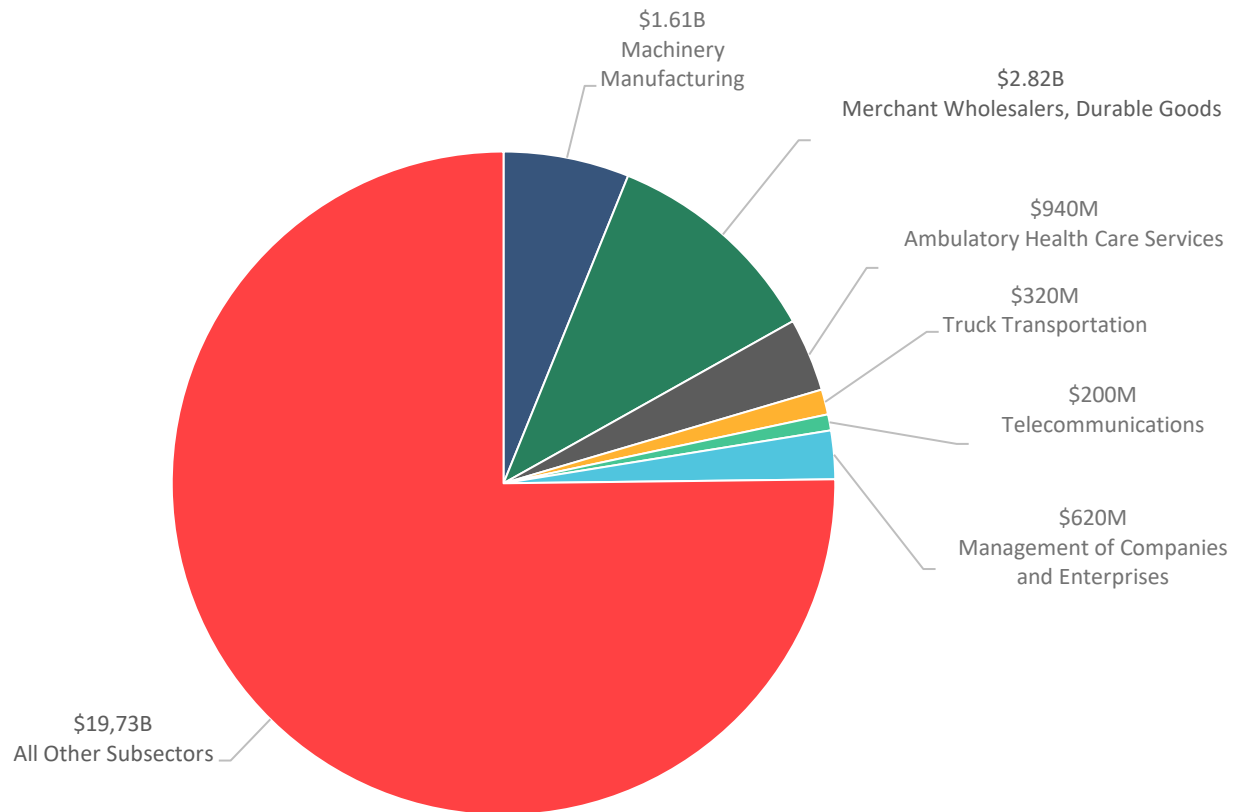
Taking a deeper dive into industry subsectors represented at the three-digit NAICS code level provides a contextualized framework for understanding labor needs (see Table 3, Figures 12 and 13). Discussions with regional key interest groups highlighted the long-standing manufacturing culture in the region, and the deeper dive into subsector data shows this. The manufacturing sector in the region is highly diversified, including machinery manufacturing, food manufacturing, fabricated metal products, chemical manufacturing, and paper and wood product manufacturing. Table 3 displays employment by manufacturing subsector and the employment concentration. Concentrations above 1 reflect a greater density of employment in these subsectors compared to other regions. The context of the manufacturing subsectors can signal specialized skills that are in high demand within the region.

**Table 3. Manufacturing Industry Subsector, Jobs, and Employment Concentration (2023)**

Industry Subsector	2023 Jobs	2023 Employment Concentration
Primary Metal Manufacturing	3,356	7.85
Machinery Manufacturing	7,485	5.75
Leather and Allied Product Manufacturing	152	4.27
Food Manufacturing	4,935	2.45
Fabricated Metal Product Manufacturing	2,889	1.73
Plastics and Rubber Products Manufacturing	1,083	1.28
Nonmetallic Mineral Product Manufacturing	518	1.05
Paper Manufacturing	396	0.94
Chemical Manufacturing	916	0.89
Wood Product Manufacturing	421	0.83

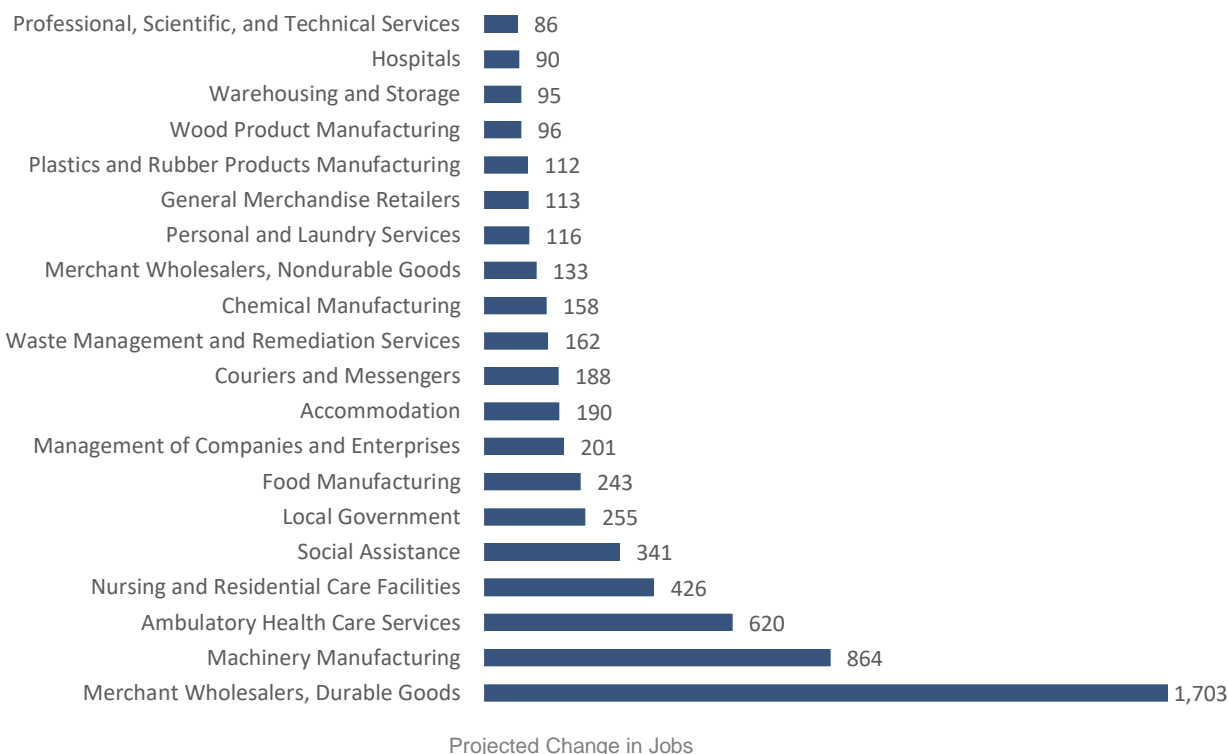
Further exploring subsectors by GRP provides additional contextual information for labor market needs. Below, in Figure 12, merchant wholesalers and durable goods constitute the majority of wholesale trade at \$2.8B in GRP, while ambulatory health care services lead the health care sector as the largest employers and contributors to GRP at \$940M (UnityPoint Health in Illinois and Genesis Health System in Iowa). Figure 13 below goes on to show the projected fastest growing subsector jobs being merchant wholesalers and durable goods, followed by machinery manufacturing.

**Figure 12. 2022 Quad Cities Gross Regional Product by Subsector**



Sources: U.S. Bureau of Labor Statistics, Lightcast; industries displayed by three-digit NAICS code.

**Figure 13. Projected Fastest-Growing Subsectors, 2024–2029**



Sources: U.S. Bureau of Labor Statistics, Lightcast; industries displayed by three-digit NAICS code.

### Employment Concentration

In regional economics, the location quotient (LQ) is an analytical statistic that measures a region's industrial specialization relative to a larger geographic unit.<sup>7</sup> Location quotients may be used to understand regional specialization and concomitant labor demand. As location quotients increase over time, they can indicate emerging regional industry specialization as they approach 1. An LQ greater than 1 means that the region has a higher concentration of employment in that sector compared with other regions, and thus a specialization. This can signal a competitive advantage for the region in terms of natural resources, talent pools, or transit connectivity.

<sup>7</sup> Pominova, M. & Gabe, T. (2022). *The stability of location quotients*. Southern Regional Science Association. Also, see [U.S. Department of Commerce, Bureau of Economic Analysis](#) definition of Location Quotient.

At a two-digit NAICS code level, the largest concentration of workers can be found in manufacturing (1.6 LQ), wholesale trade (1.44 LQ), management of companies (1.66 LQ), educational services (1.35 LQ), and health care (1.17 LQ). Figure 14 displays the 2024 employment concentrations by three-digit NAICS codes cross-referenced with five-year projected increases. This visual shows leading subsectors of manufacturing, health care, and wholesale trade observed in the upper right quadrant with emerging subsectors pertaining to rentals and leasing along with accommodation reflecting the growing leisure and hospitality seen in the third quadrant.

Employment concentration by subsector serves as an indicator of occupational demand in industries, signaling the need for technical and specialized skills in top industry sectors in the region.<sup>8</sup> Some examples of leading subsectors within the region include machinery manufacturing, with a 5.97 employment concentration and a projected 9 percent growth rate over the next five years, followed by fabricated metal product manufacturing with a 1.73 LQ and 2 percent projected growth rate, food manufacturing with a 2.45 LQ and 1 percent projected growth rate, and plastics and rubber product manufacturing with a 1.34 LQ and 9 percent projected growth rate. Both chemical and paper manufacturing demonstrate a strong emerging subsector characteristic with projected growth rates of 12 percent and 11 percent, respectively.

The subsectors engaged in transportation, warehousing, and wholesale trade display varying degrees of employment concentration. Truck transportation is maturing with a 1.39 LQ; durable goods wholesalers and rail transit leading with a 2.35 LQ and an 18 percent projected growth rate and a 1.15 LQ and a 4 percent projected growth rate, respectively; and warehousing and storage holding steady with no projected growth.

Cross-referencing these data against available education and training pathways as seen in the pathway alignment section of the report (page 96), the ability to maintain full-time employment while attending training programs is a motivating factor for adult learners and an increasing worker preference.<sup>9</sup> Flexible scheduling and accelerated upskilling will also appeal to the employers who offer tuition subsidies and may encourage the use of these worker benefits. Research from Canada, for example, shows 70 percent of employers offer financial incentives for job-related education, though only 22 percent of employees use it, citing a lack of time and

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8 U.S. Bureau of Labor Statistics. (2014). Measuring occupational concentration by industry. *Beyond the Numbers*, 3(24). <https://www.bls.gov/opub/btn/volume-3/pdf/measuring-occupational-concentration-by-industry.pdf>

9 The Chronicle of Higher Education and Guild Education. (2021). *Meeting the needs of working adult learners: Students and administrators on post-pandemic imperatives*.

clarity around how, exactly, to advance their skills.<sup>10</sup> Clear and concise educational pathway mapping that is regularly shared with employers and human resource professionals will support the adult learners as they seek to begin a living wage career path or upskill from their current position. Examples of opportunities to create clearer pathways in engineering, transportation, distribution and logistics, and construction are detailed below.

**Engineering/Pre-engineering:** Ensuring the pre-engineering program at Black Hawk College is a fully transferable associate of applied science (AAS) program to WIU will also improve labor supply for the subsectors, and for equity purposes, implementing a warm handoff for students from historically marginalized populations is an essential strategy. This will support student success as learners transition to the university system. Credit for prior learning (or prior learning assessment) programs are also recommended to attract students already working within the sector and from historically underserved populations into pre-engineering pathways that offer increased opportunity for economic mobility.

**Transportation, Distribution, and Logistics:** Pathways in transportation, distribution, and logistics also display gaps for both commercial driver's license (CDL) A and B training through noncredit and entry-level supply chain specialist programs leading to logistics certificate and bachelor's degree programs at WIU. The highly specialized content of supply chain management can be a deterrent for students; thus, providing a short-term, 40-hour credential that leads to entry-level supply chain specialists and logistics jobs can provide a more accessible on-ramp for students interested in the field. This credential can include Occupational Safety and Health Administration (OSHA) 10-hour and forklift industry credentials, along with principles of lean processes and inventory systems with Microsoft Excel.

**Construction:** While construction pathways display a gap, the trades at a postsecondary level typically are supported through labor unions and registered apprenticeship programs. That said, surveying, geographic information systems (GIS), and construction management are all on-ramps to the field in a nontrade pathway that can be created at the community college level to encourage these important career pathways.

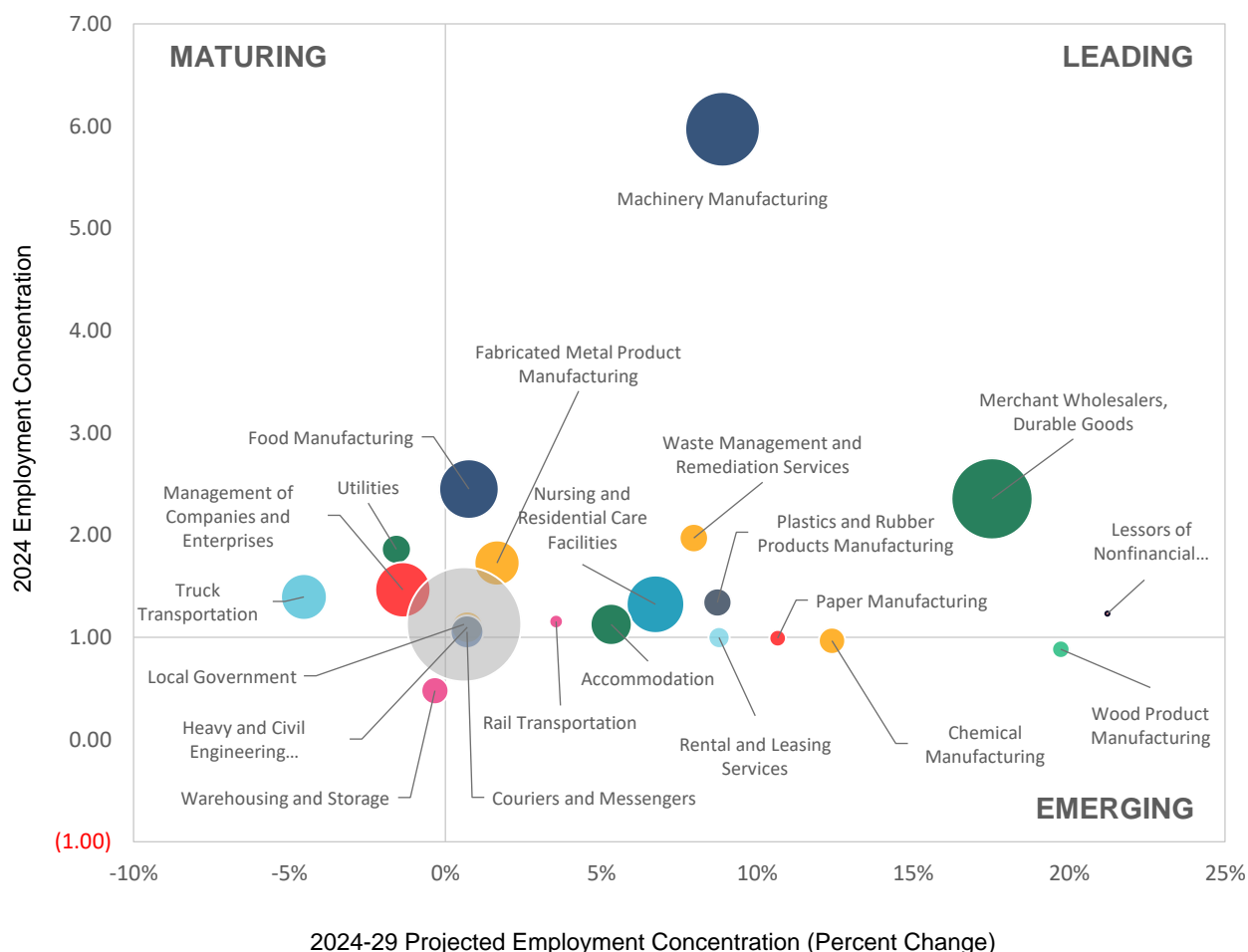
Given the leading subsectors of accommodation with a 1.13 LQ and 5 percent projected growth rate and rental and leasing with a 1.0 LQ and 9 percent projected growth rate, hospitality pathways will likely be in high demand in the coming years. This was validated by interviews with the Quad Cities Chamber economist who noted the growing interest and investment in leisure and hospitality as a top sector for the region. Pathway analysis shows a high quantity of high school concentrators, though minimal completions out of two-year programs and none out

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<sup>10</sup> Stevens, A. (2023). *The challenges of being an adult learner and how to overcome them*. Career Foundry. <https://careerfoundry.com/en/blog>

of a four-year institution. Instituting a transferable pathway for hotel and restaurant management programs and certificate-based stackable credentials that lead toward the bachelor's degree will support the expansion of this emerging sector.

**Figure 14. 2024 Employment Concentration by Subsector**



Sources: U.S. Bureau of Labor Statistics, Lightcast; industries displayed by three-digit NAICS code.

### Occupational Trends

Occupational analysis by industry sector begins by looking at annual hires and annual job openings at the two-digit SOC level. The two-digit occupational clusters per sector are derived from O\*NET's occupations within the 16 federal career clusters. Table 4 displays the industry sector and corresponding O\*NET occupational cluster used to analyze occupational demand by sector. The O\*NET clusters are used in the industry sector and occupational deep dive section to validate the occupations that are included in each deep dive and their respective demand

occupations. Each set of occupational clusters found in Table 5 are derived from the O\*NET cluster identified in Table 4. Table 5 provides an overview of demand for the top five industry sectors based on their respective contributions to GRP, employment concentration, and the crosscutting nature of skills within digital technology and business management.

**Table 4. Industry and Corresponding O\*NET Career Cluster**

Industry	O*NET's Career Cluster
Health Care	Health Science
Management and Business Administration	Business Management and Administration
Digital Technology	Information Technology
Manufacturing	Manufacturing
Transportation	Transportation, Distribution, and Logistics

**Table 5. Annual Hires and Job Openings by Sector and Occupational Cluster**

Health Care Cluster	2023 Hires	Avg. Annual Openings
Health Care Support	5,776	1,109
Health Care Practitioners and Technical	3,442	577
Office and Administrative Support	466	107
Management	275	63
Life, Physical, and Social Science	14	4
Manufacturing Cluster	2023 Hires	Avg. Annual Openings
Production	9,431	1,997
Installation, Maintenance, and Repair	2,365	519
Architecture and Engineering	1,034	294
Business and Financial Operations	526	115



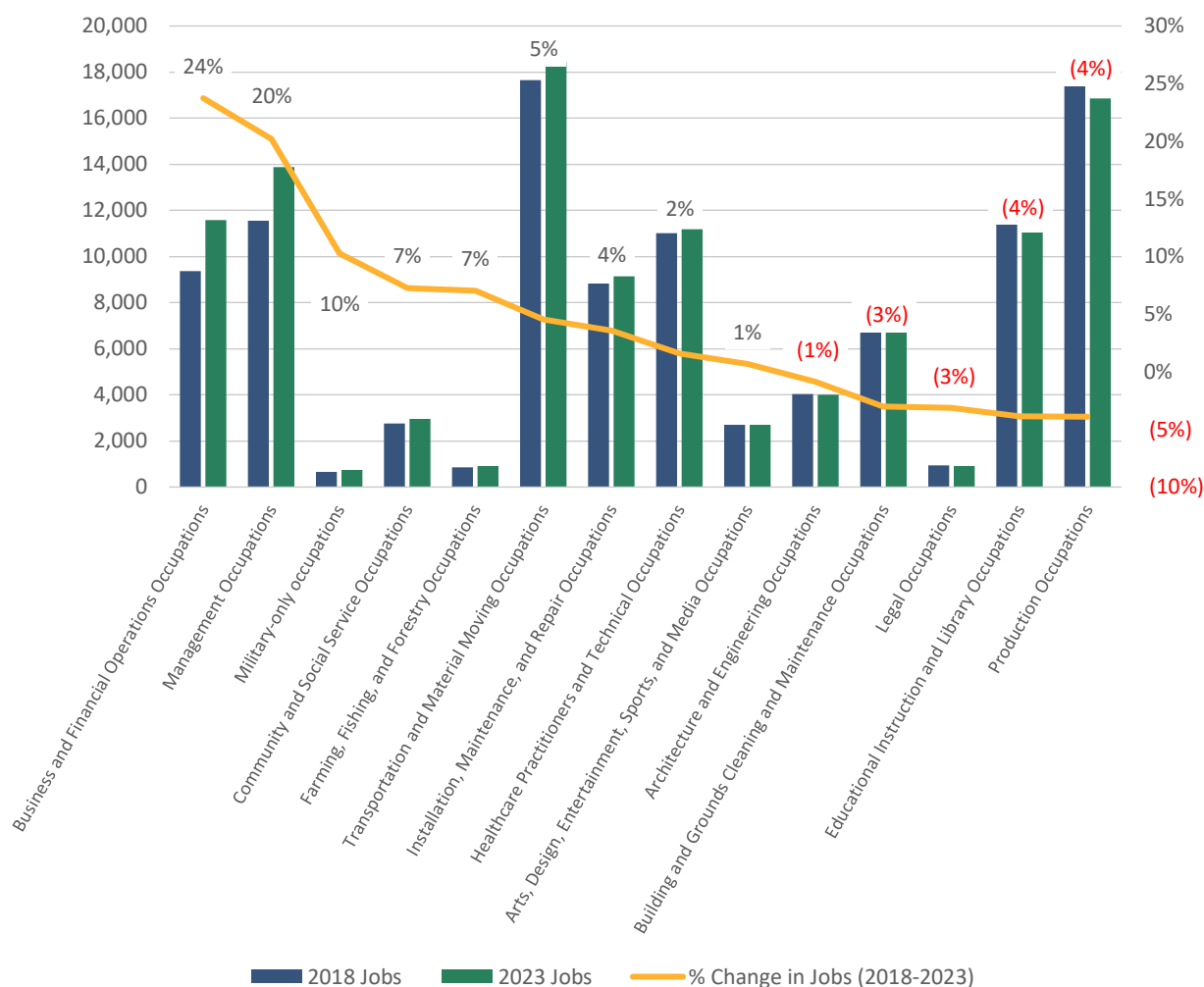
Office and Administrative Support	379	76
Management	109	34
Transportation and Material Moving	32	7
Life, Physical, and Social Science	16	8
<b>Wholesale Trade, Transportation, and Warehousing Cluster</b>	<b>2023 Hires</b>	<b>Avg. Annual Openings</b>
Transportation and Material Moving	9,769	1,552
Installation, Maintenance, and Repair	1,504	334
Business and Financial Operations	266	64
Office and Administrative Support	237	56
Management	185	45
Construction and Extraction	13	2
<b>Information and Digital Technology Cluster</b>	<b>2023 Hires</b>	<b>Avg. Annual Openings</b>
Computer and Mathematical	1,559	308
Business and Financial Operations	844	158
Office and Administrative Support	130	17
<b>Management and Business Administration Cluster</b>	<b>2023 Hires</b>	<b>Avg. Annual Openings</b>
Office and Administrative Support	7,886	1,468
Management	4,055	940
Business and Financial Operations	2,991	502
Health Care Practitioners and Technical	116	26
Construction and Extraction	82	19
Farming, Fishing, and Forestry	40	8

Sources: U.S. Bureau of Labor Statistics, Lightcast; occupations displayed by two-digit SOC code.

### **Past Growth**

To supplement annual hires and job opening data, past growth and projected growth of occupations at the two-digit SOC level are included to verify the trends in occupational demand. As demonstrated by the U.S. Bureau of Labor Statistics data, over the past five years (the 2018–2023 period), the Quad Cities region experienced a 20 percent growth in management occupations and a 24 percent growth in business and financial operations, with a median hourly wage of \$43.35 and \$32.59, respectively, in 2022. Transportation and material moving occupations experienced a 5 percent increase, with a median hourly wage of \$18.51 (see Figure 15).

**Figure 15. Past Growth by Fastest-Growing Occupations, 2018–2023**

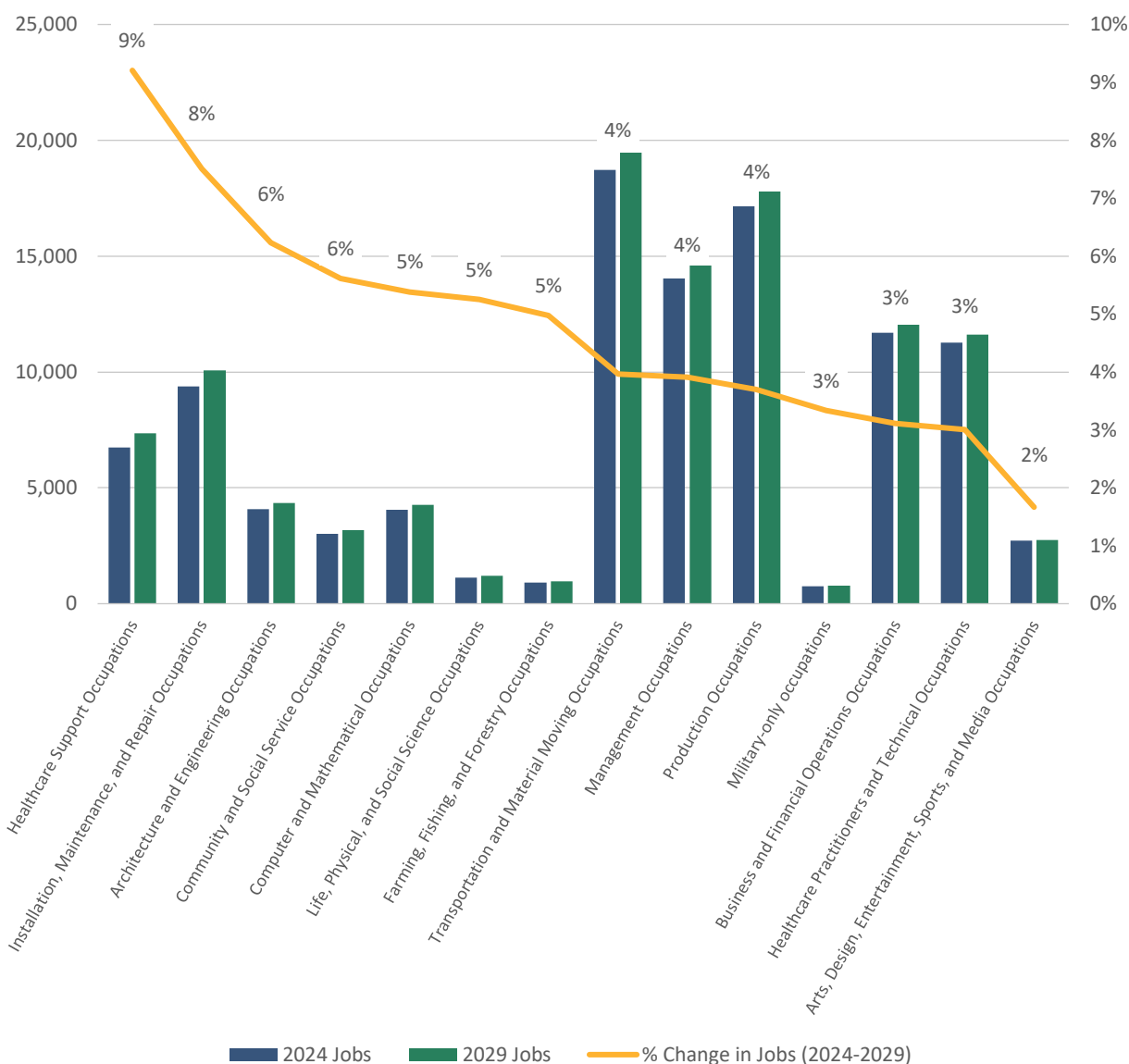


Sources: U.S. Bureau of Labor Statistics, Lightcast; occupations displayed by two-digit SOC code.

### Projected Growth

As displayed in Figure 16, the Quad Cities region is expecting a 4 percent growth in management occupations and 3 percent growth in business and financial operations, with median hourly wages at \$42.72 and \$32.83, respectively (2022 wages). Production occupations and installation, maintenance and repair jobs are projected to increase at 4 percent and 8 percent, respectively. Transportation and material moving occupations have a projected 4 percent increase, with a median hourly wage of \$18.40; health care practitioners and technicians are expected to see a 3 percent overall increase; and computer and mathematical occupations are projected to have a 5 percent increase (see Figure 17).

**Figure 16. Projected Fastest-Growing Occupations, 2024–2029**



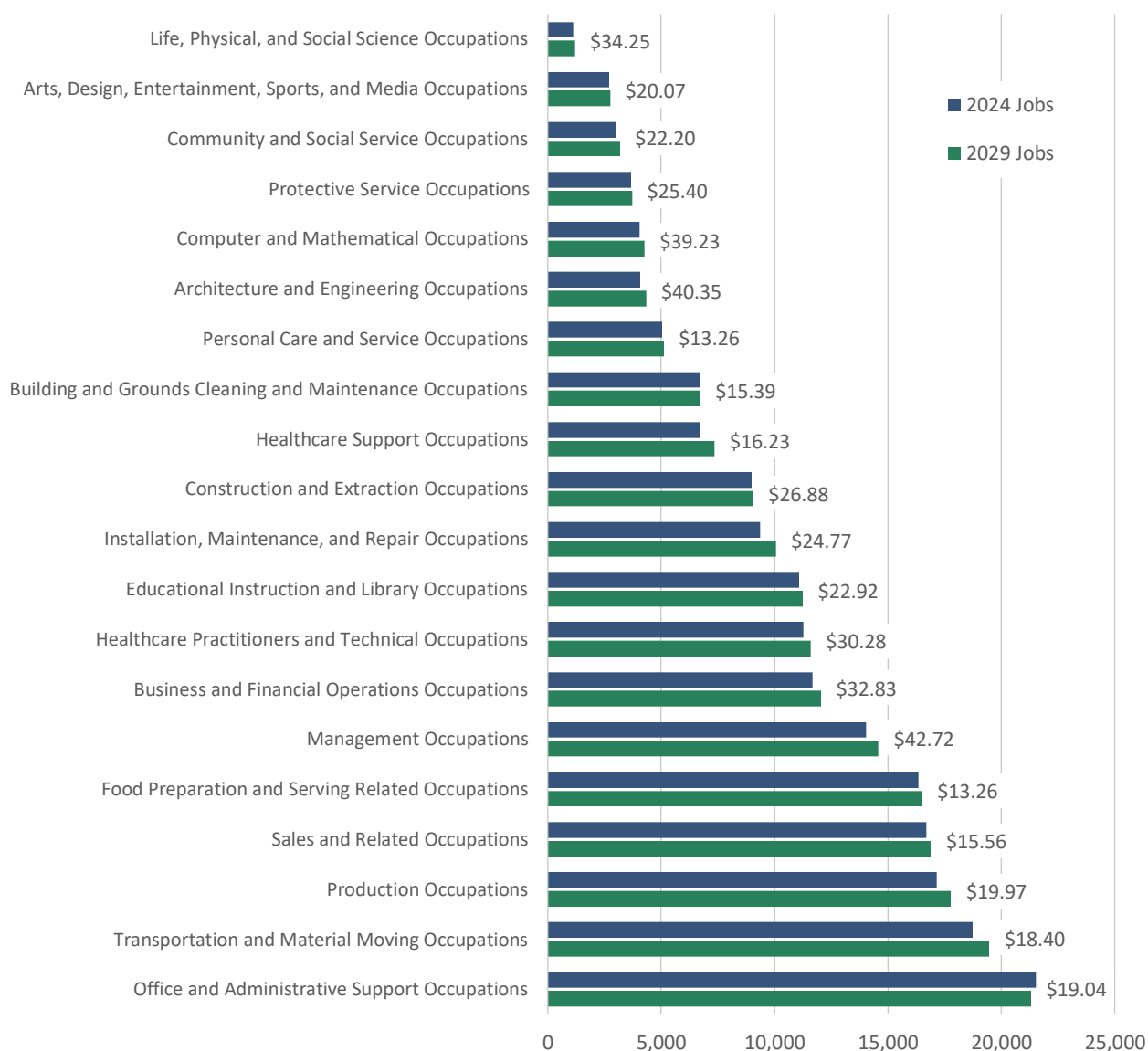
Source: U.S. Bureau of Labor Statistics, Lightcast; occupations displayed by two-digit SOC code.

Recognizing the importance of supporting the principles of “Good Jobs,” defined federally as meeting prevailing or living wage calculations and offering benefits and health care,<sup>11</sup> hourly median wages for top occupational clusters are provided in Figure 17. These median wages can be referenced against the MIT Living Wage for Rock Island County (see Appendix G.) Occupational clusters that fully meet living wage requirements for one person and no children

11 U.S. Department of Labor. (2022). *The Good Jobs Initiative*. <https://www.dol.gov/general/good-jobs/principles>

include production; management; business and financial; health care technical; education; construction; computer and mathematical (digital technology); protective service; community and social service; science-based; and arts, design, and entertainment occupations (see Figure 17).

**Figure 17. Projected Largest Occupations and Median Hourly Wages, 2024–2029**



Sources: U.S. Bureau of Labor Statistics, Lightcast; occupations displayed by two-digit SOC code.

## Occupational Cluster Analyses

Based on WestEd’s analysis of regional economic drivers and occupational demand, the analysis of occupational demand will focus on five occupational clusters:

- Health Care
- Manufacturing
- Transportation, Warehousing, and Wholesale Trade
- Information and Digital Technology
- Management and Business Administration

Three of these clusters—manufacturing; transportation, warehousing, and wholesale trade; and health care—are aligned to three of the most important industries in Quad Cities and are drivers for the regional economy. The remaining two clusters—information and digital technology and management and business administration—are crosscutting occupational clusters critical to economic growth across a wide range of industries. These cluster analyses are meant to provide a more detailed understanding of occupational demand in the above five occupational clusters looking at more specific occupations at the six-digit level in O\*NET.

Additionally, an overview of the energy and utilities sector is provided in Appendix F.

### Health Care

Based on quantity of jobs, annual hires, and average annual job openings, the highest occupational demand for the health care sector includes registered nurses with Bachelor of Science degrees in nursing, nursing assistants, home health aides, medical assistants, medical records specialists, and technician occupations. Table 6 lists the top 12 occupations with typical entry-level education. Only two of the largest occupations with the highest demand require a bachelor’s degree.

**Table 6. Top Demand for Health Care Occupations**

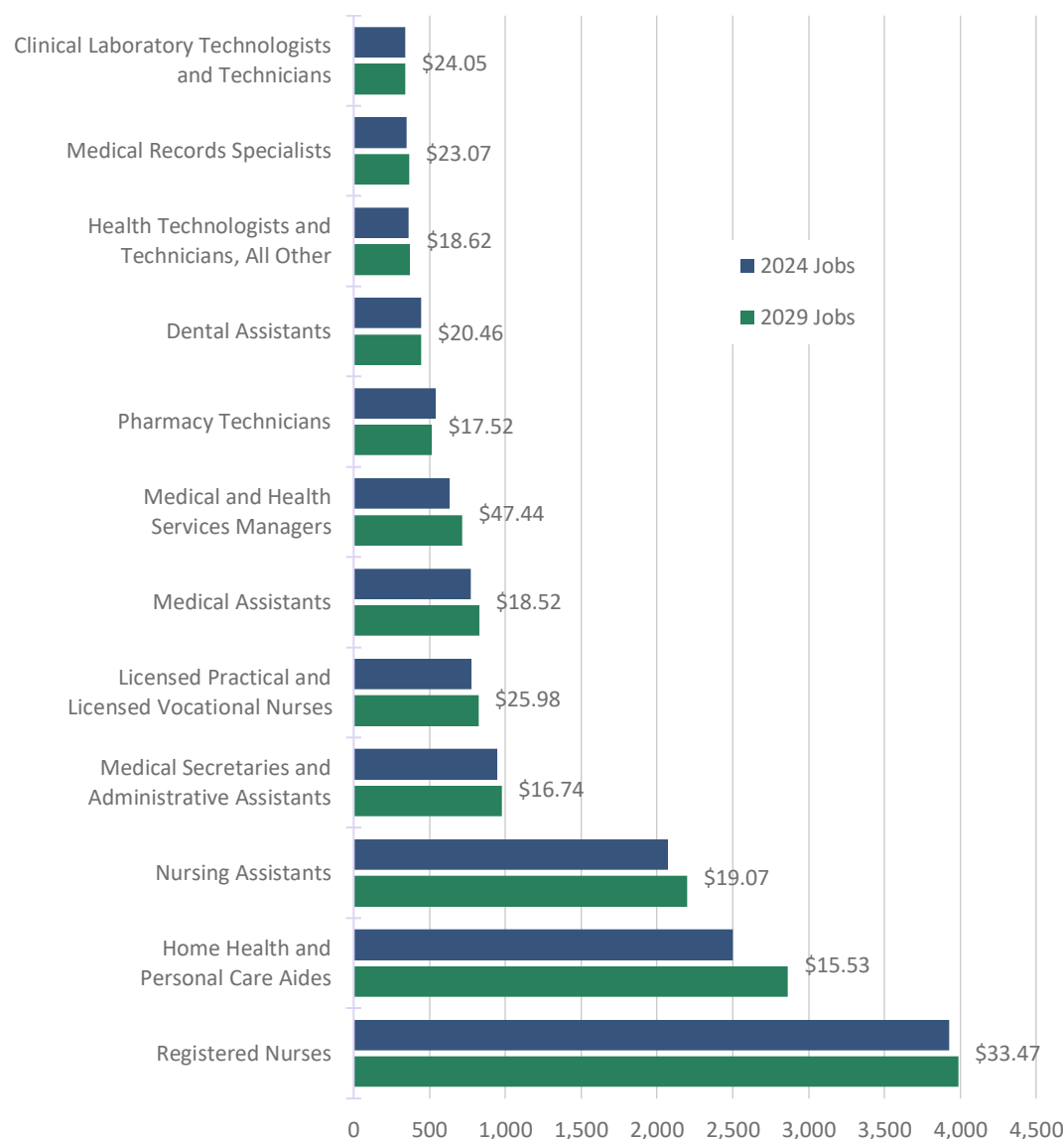
Occupation	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
<b>Registered Nurses</b>	3,917	1,209	234	\$33.47	Bachelor’s degree

Occupation	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
<b>Home Health and Personal Care Aides</b>	2,398	2,200	464	\$15.53	High school diploma or equivalent
<b>Nursing Assistants</b>	2,041	2,134	325	\$19.07	Postsecondary nondegree award
<b>Medical Secretaries and Administrative Assistants</b>	935	466	108	\$16.74	High school diploma or equivalent
<b>Licensed Practical and Licensed Vocational Nurses</b>	765	429	71	\$25.98	Postsecondary nondegree award
<b>Medical Assistants</b>	754	514	112	\$18.52	Postsecondary nondegree award
<b>Medical and Health Services Managers</b>	610	275	63	\$47.44	Bachelor's degree
<b>Pharmacy Technicians</b>	549	295	52	\$17.52	High school diploma or equivalent
<b>Dental Assistants</b>	443	221	64	\$20.46	Postsecondary nondegree award
<b>Medical Records Specialists</b>	346	126	27	\$23.07	Postsecondary nondegree award
<b>Clinical Laboratory Technologists and Technicians</b>	341	111	22	\$24.05	Bachelor's degree
<b>Health Care Practitioners and Technical Workers, All Other</b>	47	13	3	\$39.24	Postsecondary nondegree award

In the health care sector, those occupations that do not require a degree typically have wages that fall beneath the living wage for the region. Figure 18 displays the projected growth in jobs with median wages. This implies that education and training for these occupations should be part of a pathway using latticed, accelerated credentials to qualify individuals for employment

while keeping them on a path to further education that results in living wage occupations, such as those requiring a bachelor's degree. The largest occupations requiring a bachelor's degree are nurses, health care administrators, and behavioral health counselors. Pathways from entry-level credentials should be transparently connected to middle-skilled and advanced degree options in these fields.

**Figure 18. Projected Fastest-Growing Health Care Occupations, 2024-2029**



Sources: U.S. Bureau of Labor Statistics; Lightcast, Q1 2024; health care occupations displayed by six-digit SOC code.



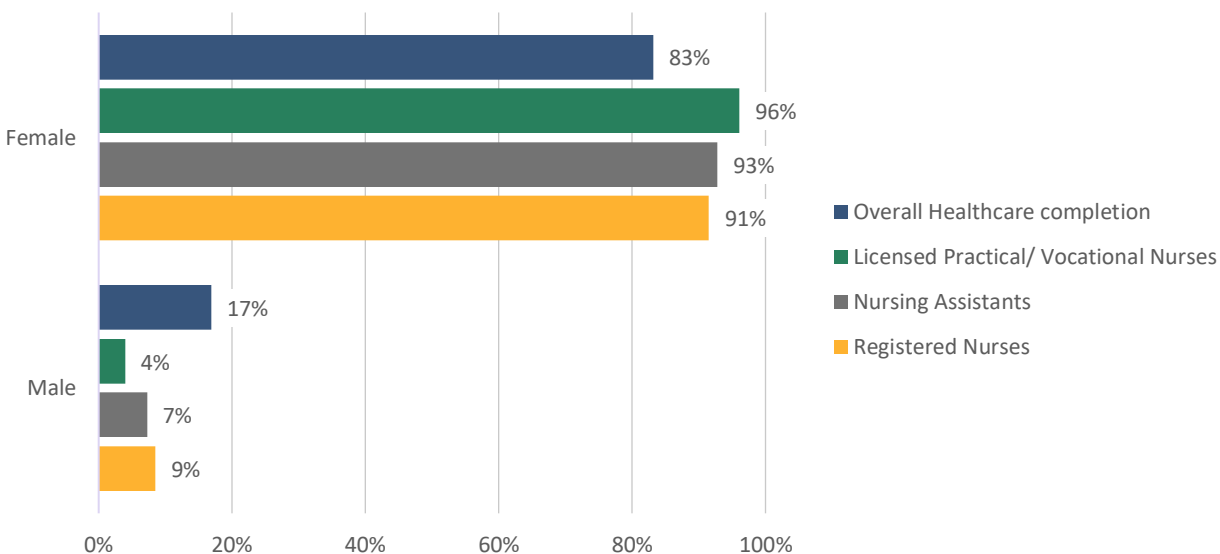
### **Equity Findings: Health Care**

Equity findings for completion in the following section comprise data from the five Quad Cities serving postsecondary institutions: Black Hawk College, Western Illinois University, Augustana College, St. Ambrose University, and Eastern Iowa Community College. Among the top three in-demand occupations within the health care field, the majority of completions are by female students (see Figure 19). Hispanic/Latin, Black/African American, and White learners make up the majority of completions across the occupations in highest demand, including registered nurses, licensed vocational nurses, and nursing assistants. A disproportionate impact is observed among completions for higher-wage occupations.<sup>12</sup> This means the proportion of students completing educational programs in high-wage careers do not reflect the composition of the community as a whole, with fewer Asian and Hispanic students engaged in the more lucrative career pathways. Asian and Hispanic students constitute a large number of completions for entry-level, low-wage nursing assistant jobs, with Black/African American and White students continuing their educational and career trajectory into middle-skilled and higher-wage occupations, such as vocational nursing and registered nursing (see Figure 20). Enhanced support systems for these students centered on student needs (e.g., transportation, childcare, earn-while-you-learn opportunities) may help to alleviate the equity gap in attainment of higher-level credentials in health care.

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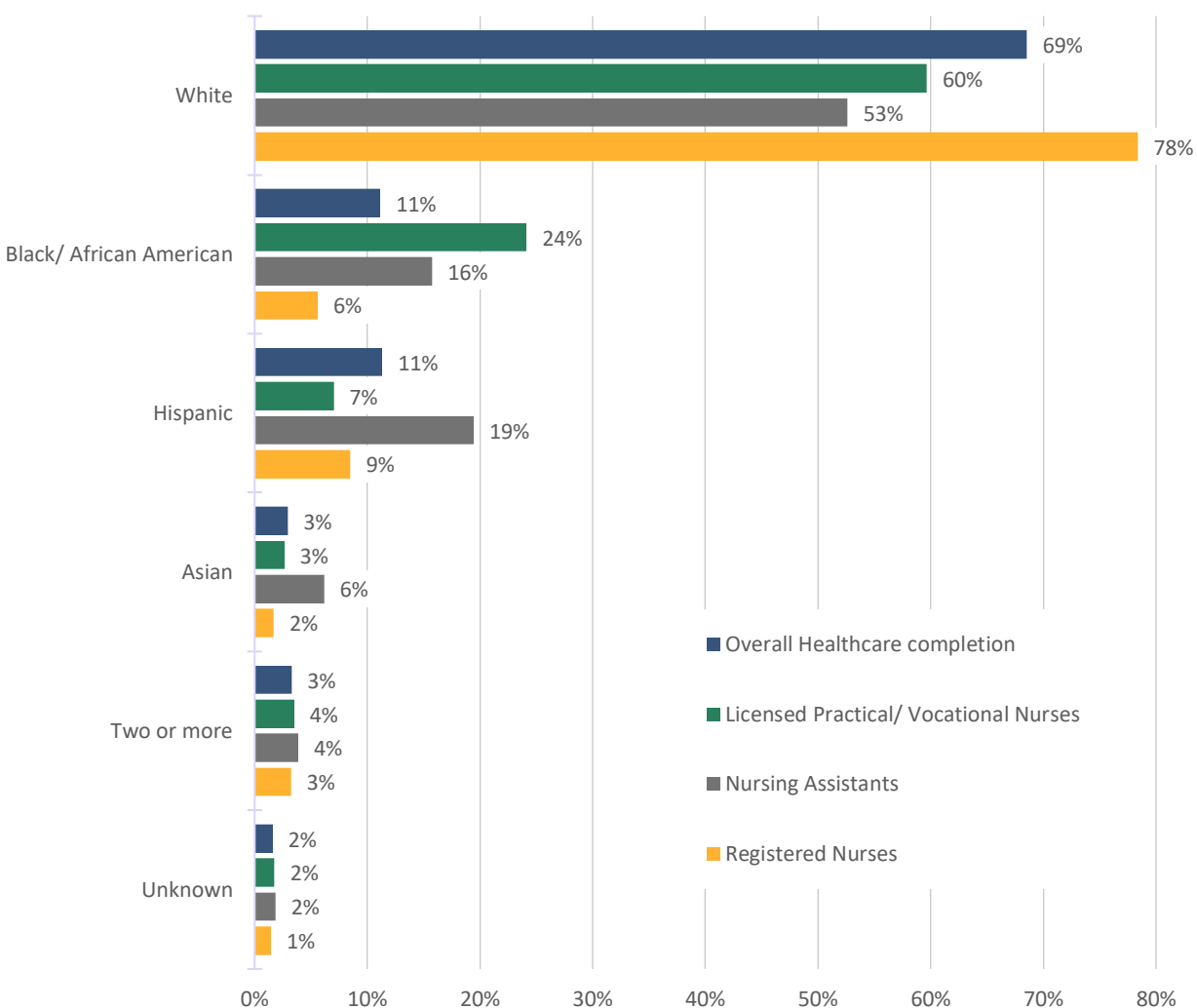
<sup>12</sup> Strawn, J. (2022). Career pathways: A strategy to boost college completion and economic mobility. MDRC. <https://www.mdrc.org/publication/career-pathways>

**Figure 19. Completion by Gender and Largest Occupations in Health Care**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

**Figure 20. Completion by Race/Ethnicity and Largest Occupations in Health Care**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

### Manufacturing Occupational Cluster

Based on the largest quantity of jobs, annual hires, and average annual job openings, the highest occupational demand for the manufacturing sector includes assemblers and fabricators, maintenance and repair workers, supervisors of production workers, inspectors, mechanical engineers, and machinists. Table 7 lists the top 12 occupations in manufacturing with typical entry-level education; three of the largest occupations with the highest demand require a bachelor's degree.

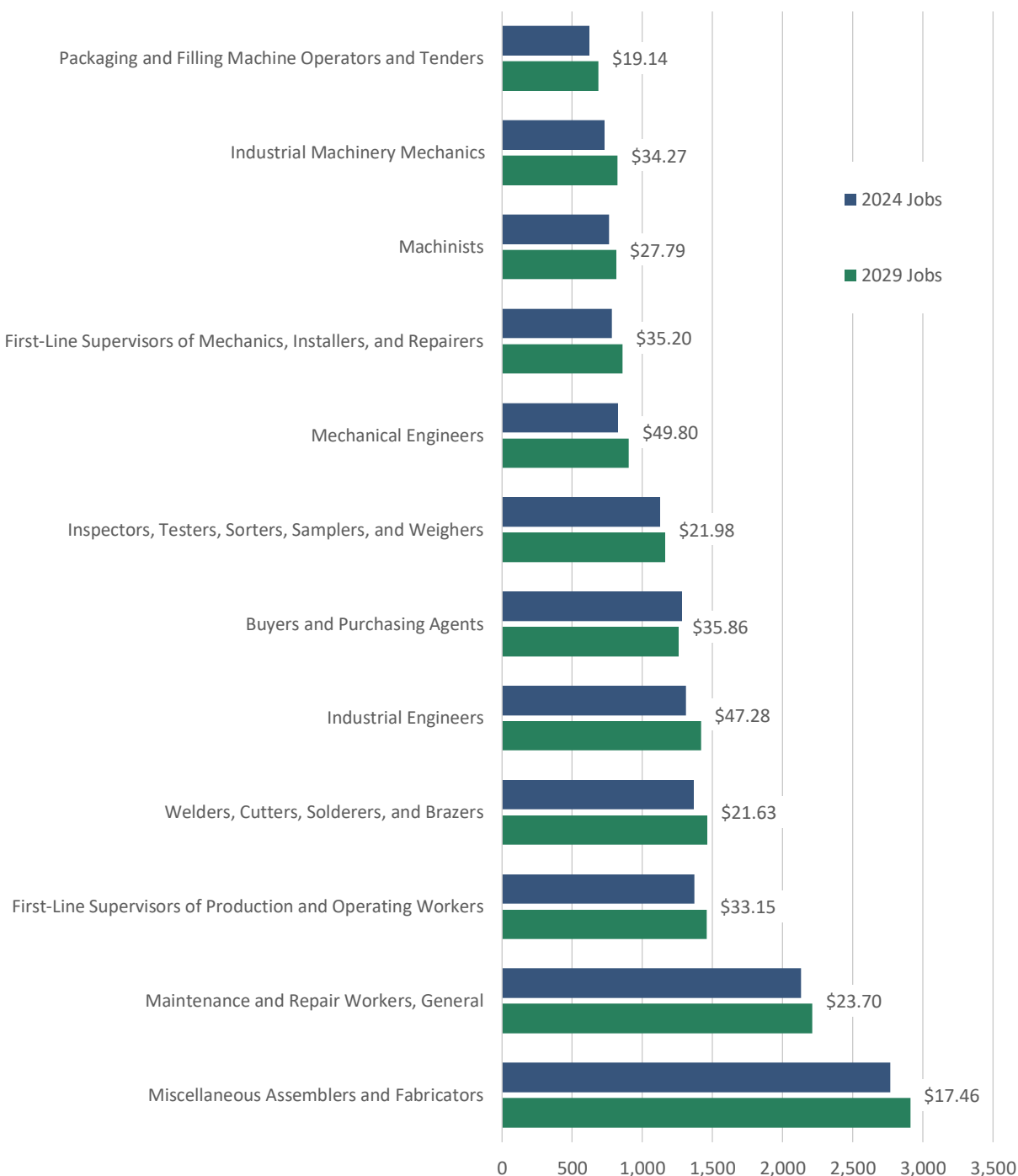
**Table 7. Top Demand for Manufacturing Occupations**

Occupation	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry-Level Education
Miscellaneous Assemblers and Fabricators	2,694	1,762	349	\$17.46	High school diploma or equivalent
Maintenance and Repair Workers, General	2,101	1,103	213	\$23.70	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	1,340	542	151	\$33.15	High school diploma or equivalent
Welders, Cutters, Solderers, and Brazers	1,327	659	163	\$21.63	High school diploma or equivalent
Buyers and Purchasing Agents	1,283	526	116	\$35.86	Bachelor's degree
Industrial Engineers	1,279	324	100	\$47.28	Bachelor's degree
Inspectors, Testers, Sorters, Samplers, and Weighers	1,106	644	142	\$21.98	High school diploma or equivalent
Mechanical Engineers	798	216	66	\$49.80	Bachelor's degree
First-Line Supervisors of Mechanics, Installers, and Repairers	757	372	87	\$35.20	High school diploma or equivalent
Machinists	746	327	90	\$27.79	High school diploma or equivalent

Occupation	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry-Level Education
<b>Industrial Machinery Mechanics</b>	704	267	80	\$34.27	High school diploma or equivalent
<b>Packaging and Filling Machine Operators and Tenders</b>	600	376	85	\$19.14	High school diploma or equivalent

In the manufacturing sector, multiple occupations that require a postsecondary nondegree award have median hourly wages that fall above the living wage, as shown in Figure 21. The highest number of jobs is in the category of miscellaneous assemblers and fabricators, which shows a median hourly wage below the living wage, indicating that pathways from entry-level assemblers and fabricators to mechanical and electrical technician certificates, design engineer programs (using computer-aided drafting), or pre-engineering pathways should be transparent, accelerated, and accessible to students.

**Figure 21. Projected Fastest-Growing Manufacturing Occupations, 2024–2029**

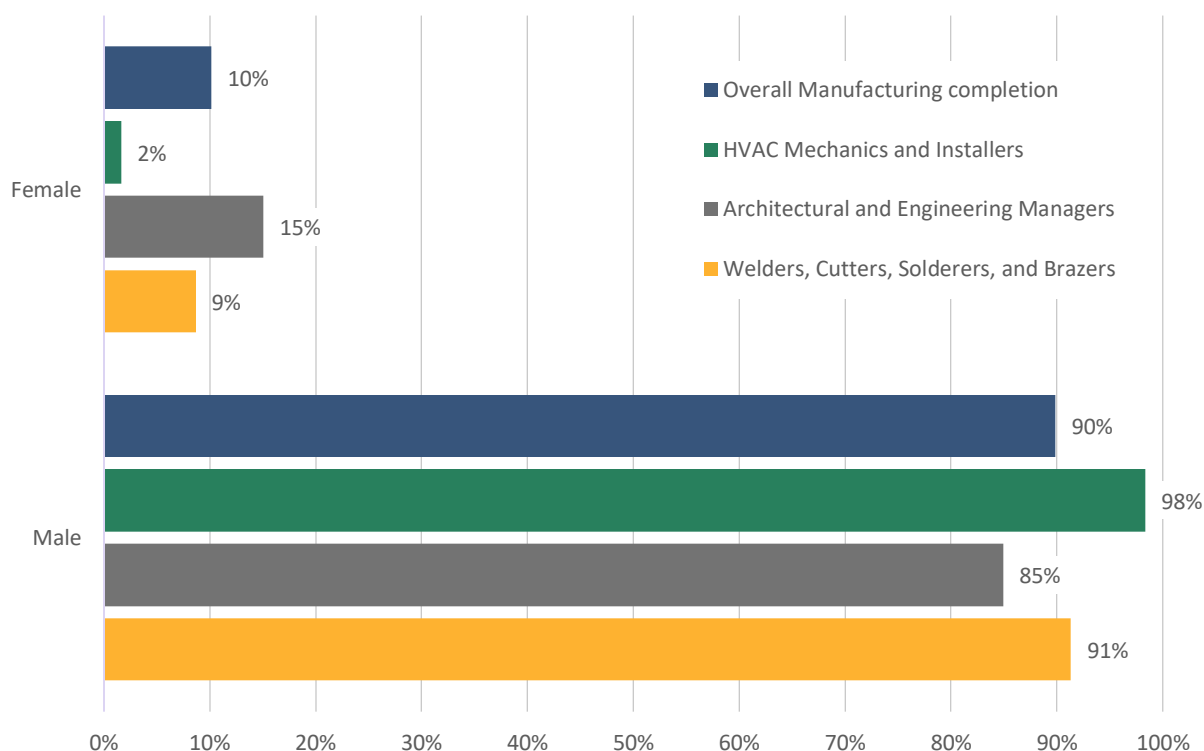


Sources: U.S. Bureau of Labor Statistics; Lightcast, Q1 2024; manufacturing occupations displayed by six-digit SOC code.

### Equity Findings: Manufacturing

In the highest-paying fields within the architectural and engineering management cluster, Black/African American and Hispanic/Latino students demonstrate a lower level of completion. This indicates that the student population may require additional supports to increase access to and attainment of higher degree credentials that lead to living wages. Student focus groups are suggested to better identify the exact supports needed by this student body. There is also a demonstrated disparity in female student completions across major occupational clusters in this field, though completions aligned with architectural and engineering occupations display potential for increased equity in attainment of degrees, given that it demonstrates the largest proportion of female completers at 15 percent (see Figure 22). Non-resident alien<sup>13</sup> status is included in the race and ethnicity completion profiles as the growth of this population has had a corresponding impact on the workforce and educational systems (see Figure 23).

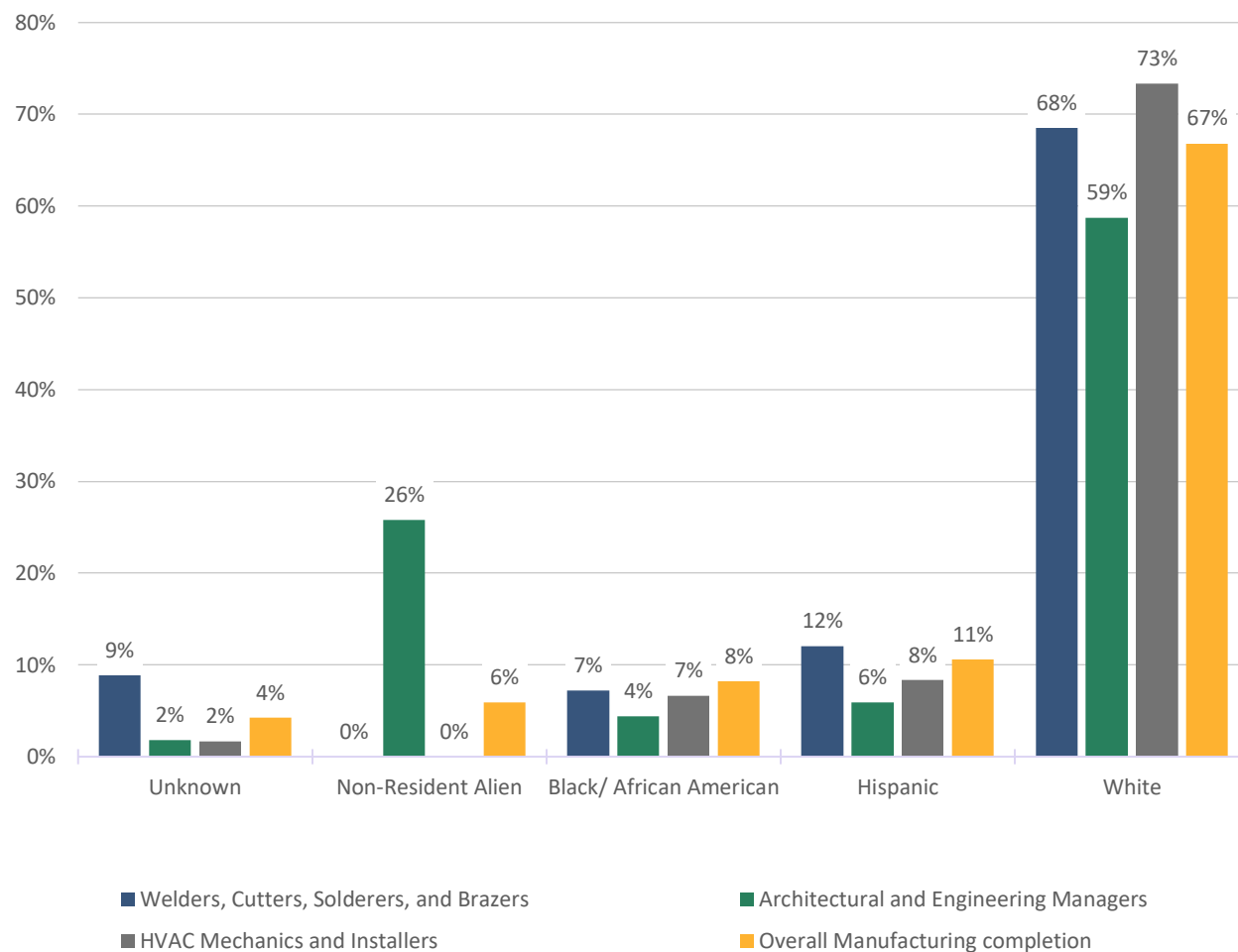
**Figure 22. Completion by Gender and Largest Occupations in Manufacturing**



<sup>13</sup> Non-resident alien in a term used in IPEDs and defined as a person who is not a citizen or national of the United States and who is in the country on a visa or temporary basis and does not have the right to remain indefinitely.

Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

**Figure 23. Completion by Race, Ethnicity, Non-resident Status, and Largest Occupations in Manufacturing**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds). “Non-Resident Alien” is the term used in IPEDS.

### Transportation, Warehousing, and Wholesale Trade Sector

Based on the largest quantity of jobs, annual hires, and average annual job openings, the highest occupational demand for the transportation, warehousing, and wholesale trade sector is for material movers, stockers, heavy and light truck drivers, diesel mechanics, machine



mechanics, and logisticians. Table 8 lists the top 12 occupations in transportation, warehousing, and wholesale trade with typical entry-level education; only one of the largest occupations with the highest demand requires a bachelor's degree.

**Table 8. Transportation, Warehousing, and Wholesale Trade Occupational Demand**

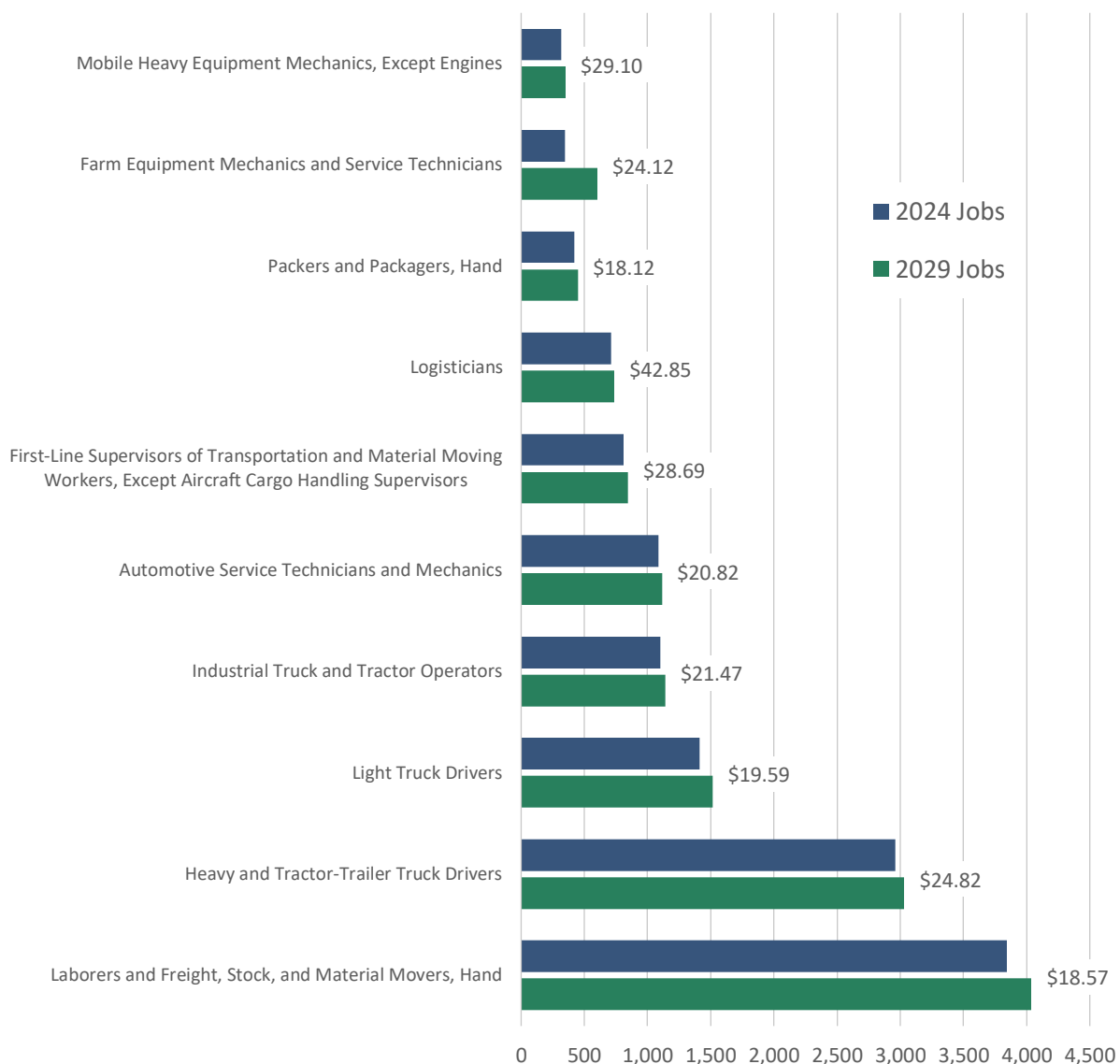
Occupation	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
<b>Laborers and Freight, Stock, and Material Movers, Hand</b>	3,769	4,190	555	\$18.57	No formal educational credential
<b>Stockers and Order Fillers</b>	3,268	3,117	570	\$16.56	High school diploma or equivalent
<b>Heavy and Tractor-Trailer Truck Drivers</b>	2,932	1,652	331	\$24.82	Postsecondary nondegree award
<b>Light Truck Drivers</b>	1,376	1,127	176	\$19.59	High school diploma or equivalent
<b>Industrial Truck and Tractor Operators</b>	1,083	686	121	\$21.47	No formal educational credential
<b>Automotive Service Technicians and Mechanics</b>	1,079	503	101	\$20.82	Postsecondary nondegree award
<b>First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors</b>	805	482	89	\$28.69	High school diploma or equivalent
<b>Logisticians</b>	710	266	64	\$42.85	Bachelor's degree

Occupation	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
<b>Industrial Machinery Mechanics</b>	704	267	80	\$34.27	High school diploma or equivalent
<b>Mobile Heavy Equipment Mechanics, Except Engines</b>	307	163	35	\$29.10	High school diploma or equivalent
<b>Transportation, Storage, and Distribution Managers</b>	304	121	28	\$48.14	High school diploma or equivalent
<b>Farm Equipment Mechanics and Service Technicians</b>	275	288	95	\$24.12	High school diploma or equivalent

Figure 24 represents the top 10 in-demand occupations projected to experience growth over the next five years with median wages. Demand is the key determinant in explaining future jobs; thus, this analysis uses U.S. Bureau of Labor Statistics projections that contain final demand by commodity groups are used to signal future job growth and concomitant demand for skilled workers.<sup>14</sup> The category of heavy and tractor-trailer truck drivers demonstrates a projected increase of 70 jobs over the next five years with a median hourly wage that is higher than the living wage. Supply chain management and logistics occupations hold the highest potential for wages in this field and typically require a bachelor's degree. Ensuring that there are equitable on-ramps for students from historically marginalized populations will contribute to greater completions in this field.

<sup>14</sup> U.S. Bureau of Labor Statistics. *Handbook of methods, employment projections and final demand*. Last Modified Date: April 30, 2024.

**Figure 24. Projected Fastest-Growing Transportation, Warehousing, and Wholesale Trade Occupations, 2024–2029**



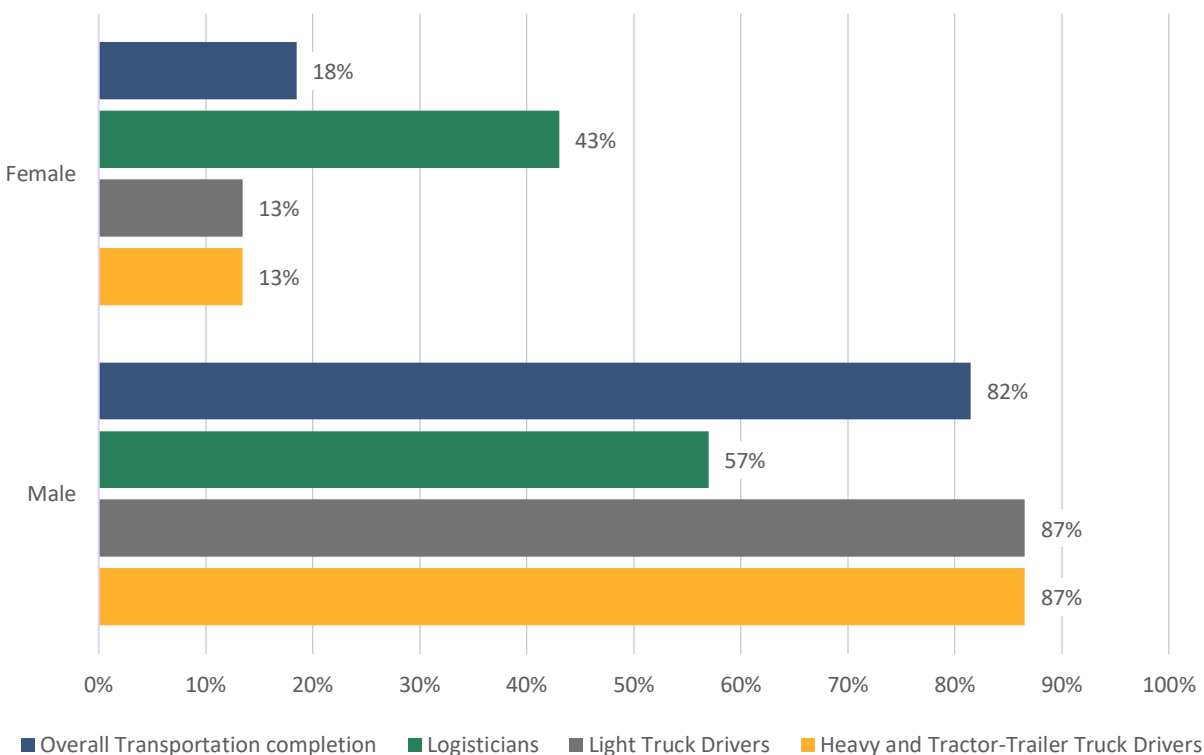
Sources: U.S. Bureau of Labor Statistics; Lightcast, Q1 2024; transportation, warehousing, and wholesale occupations displayed by six-digit SOC code.

### Equity Findings: Transportation, Warehousing, and Wholesale Trade

Academic programming in transportation and logistics is lacking both gender and race/ethnic diversity in the more lucrative occupational and career pathways of supply chain management and logistics. As shown in Figure 25, there is disparity in overall female student completions

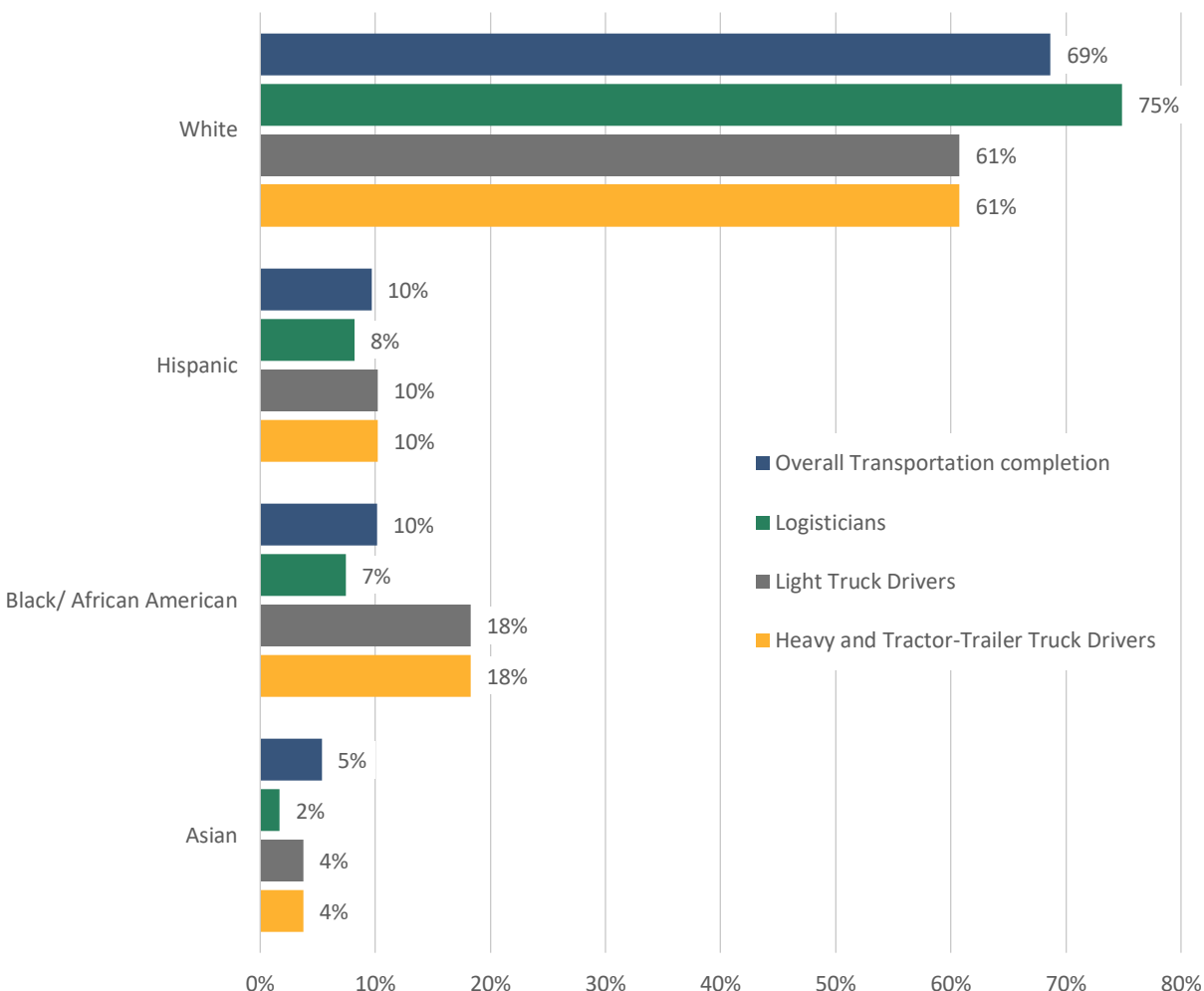
across occupations in transportation, particularly for light truck drivers and heavy and tractor-trailer truck drivers. In Figure 26, among the completions within the five institutions for the logistics pathway, 8 percent of students identified as Hispanic/Latino and 7 percent identified as Black/African American, compared with 75 percent completion from students who identified as White. Providing accessible on-ramps to these programs housed in the colleges of business is imperative to supporting equity and economic mobility for historically underserved populations. Because these programs carry a large degree of academic rigor, it is important to provide short-term entry-level pathways that provide exposure to the various concepts in the field. Some colleges have instituted a noncredit entry-level supply chain short-term training that encompasses OSHA 10-hour and forklift operator credentials as an on-ramp that prepares students for immediate employment in entry-level material mover occupations while also covering the foundations of supply chain management to support student success and continued education into the more lucrative supply chain management field. The Association for Supply Chain Management and the Manufacturing Skills Standards Council both offer short-term industry-validated credentials in the field that may be overlaid in community college or university programming to rapidly upskill both incumbent and new workers.

**Figure 25. Completion by Gender and Largest Occupations in Transportation**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

**Figure 26. Completion by Race/Ethnicity and Largest Occupations in Transportation**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

### IT and Digital Technology Occupational Clusters

Based on the largest quantity of jobs, annual hires, and average annual job openings, the highest occupational demand for the IT and digital technology occupational clusters includes the occupations of software developers, market research analysts, project management specialists, computer user support specialists, and networking occupations. Table 9 lists the top 17 occupations in IT and digital technology clusters with typical entry-level education. Only one of the largest occupations with the highest demand does not require a bachelor's degree or

associate's degree, computer user support specialist. O\*NET occupational clusters provide the foundation for analysis. Given the ubiquitous character of some occupations, such as project management and marketing research analyst, O\*NET includes them in both IT and digital technology and management and business administration clusters. This understanding can inform curricular content by signaling the need for academic programming in IT and digital technology to require project management and include options for specialties in market research.

**Table 9. Information and Digital Technology Occupational Demand**

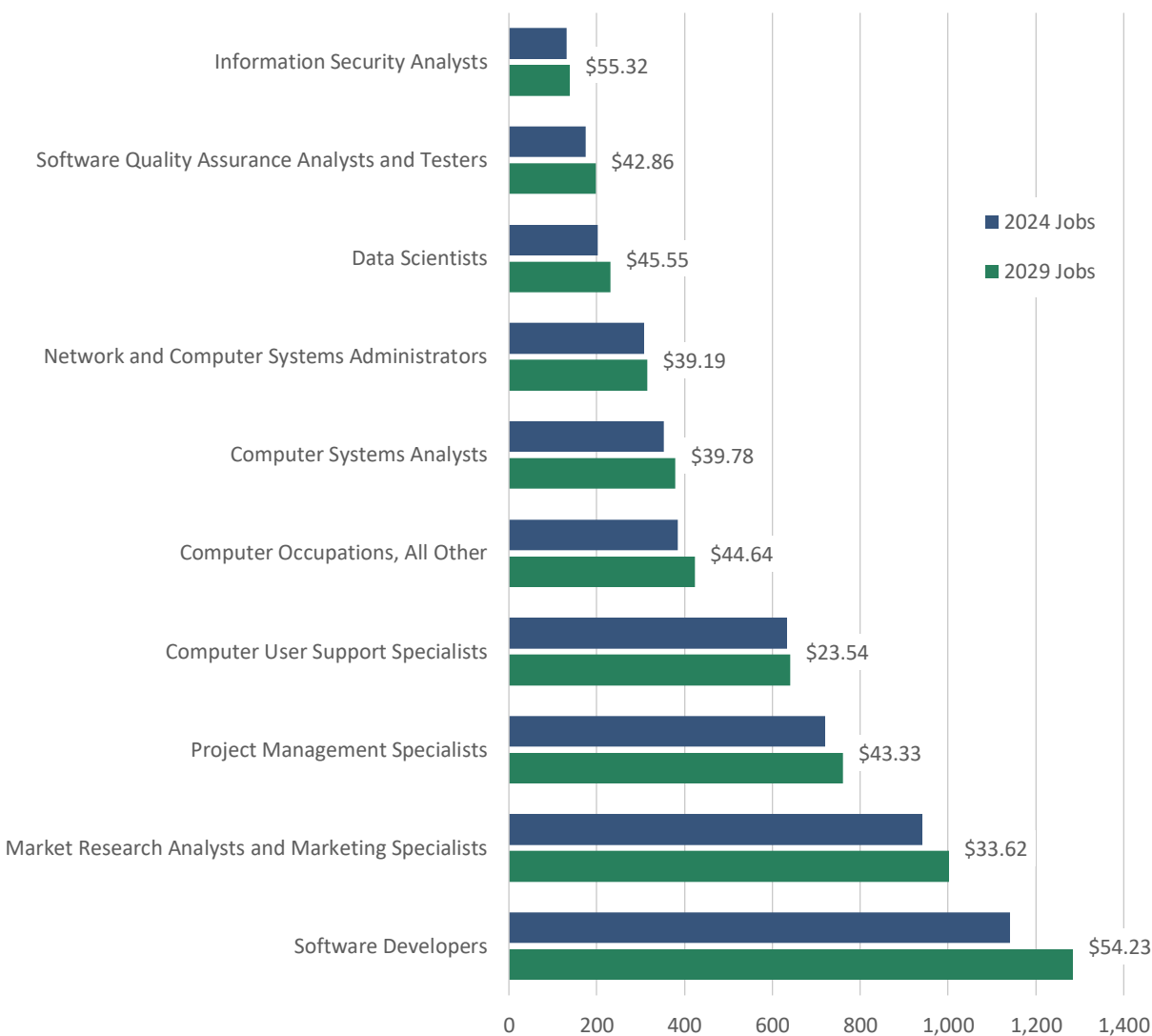
Description	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
Software Developers	1,100	452	93	\$54.23	Bachelor's degree
Market Research Analysts and Marketing Specialists	925	501	98	\$33.62	Bachelor's degree
Project Management Specialists	706	343	58	\$43.33	Bachelor's degree
Computer User Support Specialists	630	264	45	\$23.54	Some college, no degree
Computer Occupations, All Other	377	164	35	\$44.64	Bachelor's degree
Computer Systems Analysts	343	126	28	\$39.78	Bachelor's degree
Network and Computer Systems Administrators	300	108	20	\$39.19	Bachelor's degree
Computer Network Architects	265	85	14	\$55.07	Bachelor's degree
Computer Network Support Specialists	217	71	14	\$32.10	Associate's degree
Data Scientists	195	85	19	\$45.55	Bachelor's degree
Software Quality Assurance Analysts and Testers	170	78	17	\$42.86	Bachelor's degree

Description	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
<b>Information Security Analysts</b>	131	53	11	\$55.32	Bachelor's degree
<b>Computer Programmers</b>	83	24	5	\$36.99	Bachelor's degree
<b>Web and Digital Interface Designers</b>	60	23	5	\$35.28	Bachelor's degree
<b>Web Developers</b>	50	15	3	\$35.92	Bachelor's degree
<b>Database Administrators</b>	48	12	3	\$38.05	Bachelor's degree
<b>Database Architects</b>	21	<10	2	\$52.89	Bachelor's degree

Occupations within the information and digital technology sector and occupational cluster mostly require a four-year degree, with the exception of computer network support specialists and likely some entry-level positions within the fields of data science, network specialists, and web design, based on qualitative inquiry with employers. The benefit to this is that entry-level and median wages are above the living wage. Figure 27 displays occupations in order of fastest projected growth along with median wages. The largest occupations requiring a bachelor's degree are software developer, computer systems analyst, and computer and information systems analysts.



**Figure 27. Projected Fastest-Growing Technology Occupations, 2024–2029**



Sources: U.S. Bureau of Labor Statistics; Lightcast, Q1 2024; IT and digital technology occupations displayed by six-digit SOC code.

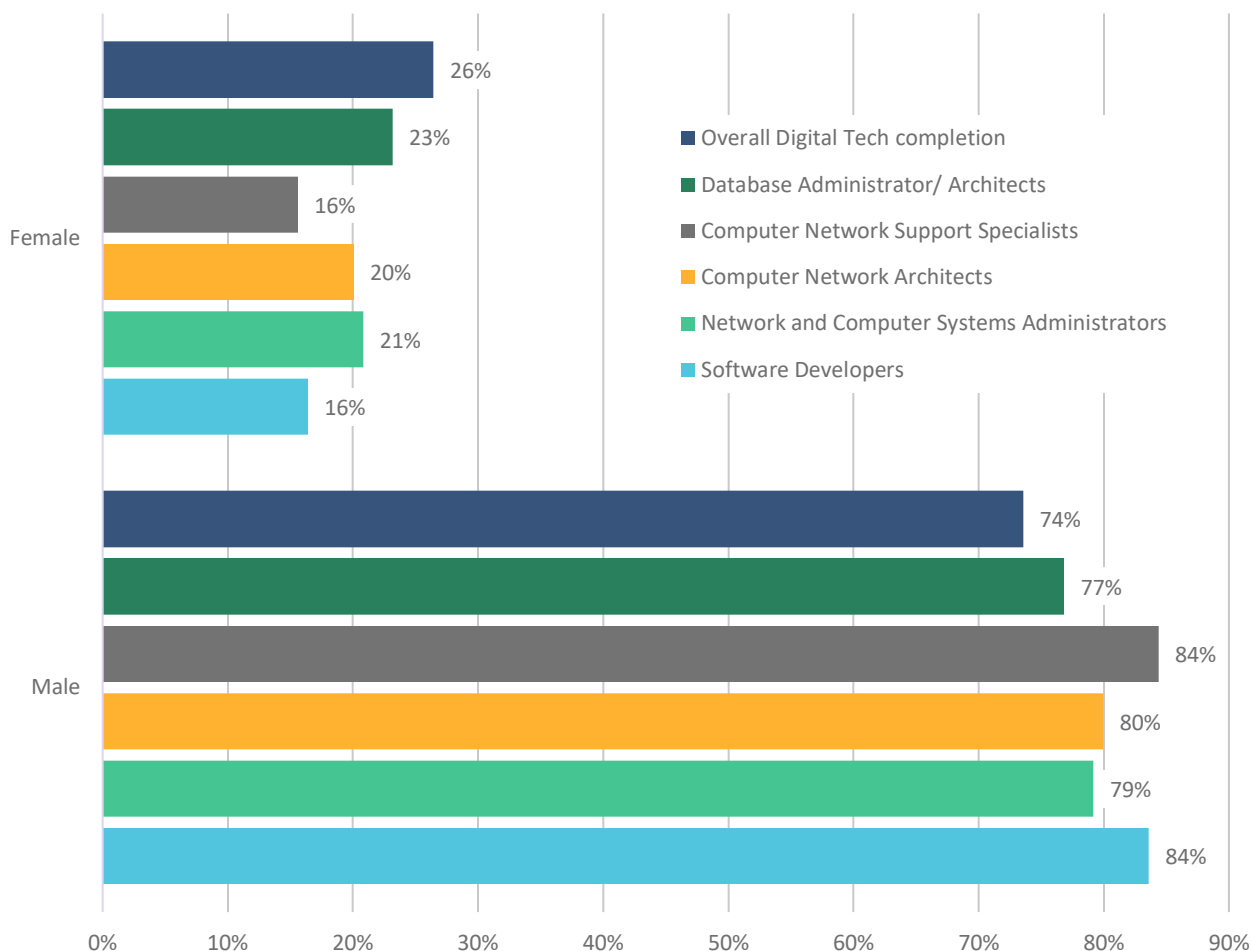
### Equity Findings: IT and Digital Technology

Men surpass women for completion rates across all information and digital technology programs at a rate of 74 percent to 26 percent, as seen in Figure 28. While completions for programming in the technology sector and occupational cluster have high rates for non-resident aliens, Hispanic/Latino student completion is lacking as illustrated in Figure 29. Note that race, ethnicity and non-resident status is not reported when completions fall below ten.

Outside of non-resident aliens and students identifying as White, Hispanic/Latino students have the next highest proportion of completions, with the largest number being in software development at 12 percent of the completion cohort. Database administration and computer network administrators and architects have demonstrated consistent demand that are well above living wage. Hispanic/Latino students constitute a small portion of these graduates, at 4 percent, 5 percent, and 6 percent, respectively.

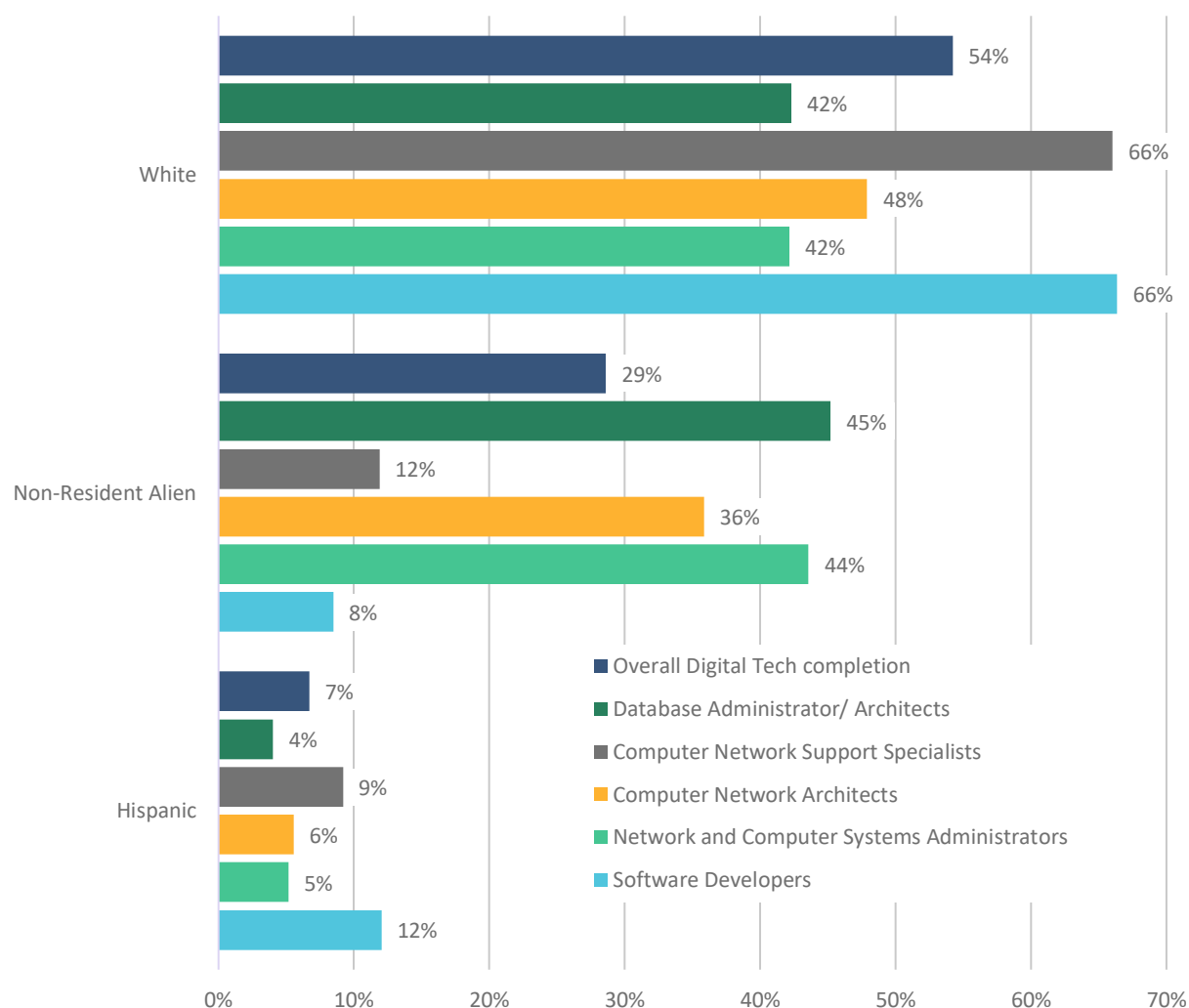
To address income disparity and support economic mobility for historically underserved populations, it is imperative that on-ramps to IT programs are enhanced through noncredit and short-term programming that culminates in industry credentials. CompTIA exams are widely accepted, thus creating value for the student in the labor market. College programming will “prepare” someone for an exam, though finding a testing center and paying for that exam are the student’s responsibility. This creates a barrier for students from historically marginalized populations and often becomes a deterrent to entering the lucrative field of information and digital technology.

**Figure 28. Completion by Gender and Largest Occupations in Digital Technology**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

**Figure 29. Completion by Race, Ethnicity, Non-resident Status, and Largest Occupations in Digital Technology**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

### Management and Business Administration Occupational Cluster

Table 10 lists the top 15 occupations for the management and business administration occupational clusters, including general and operations managers; accountants; business operations specialists; project management specialists; and managers across a range of specific sectors, such as construction, computer and information systems, and industrial production. The highest concentration of occupations requiring a high school diploma, such as

office clerks and administrative assistants, may become pathways into middle-skilled and higher-level management training and are recommended pathways to increase access for adult learners and improve opportunities for economic mobility.

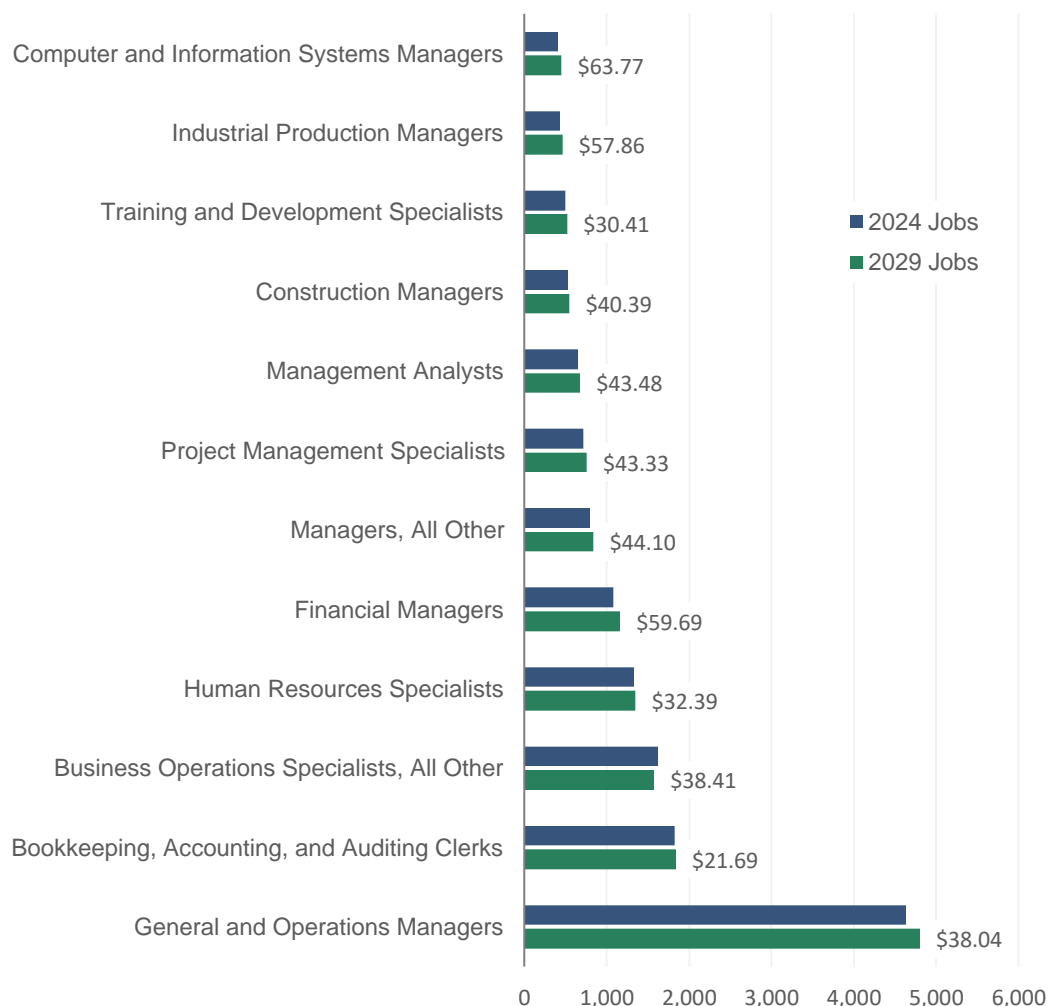
**Table 10. Management and Business Administration Occupational Demand**

Description	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
General and Operations Managers	4,574	2,098	419	\$38.04	Bachelor's degree
Bookkeeping, Accounting, and Auditing Clerks	1,815	1,134	222	\$21.69	Some college, no degree
Business Operations Specialists, All Other	1,642	742	148	\$38.41	Bachelor's degree
Human Resources Specialists	1,327	823	119	\$32.39	Bachelor's degree
First-Line Supervisors of Office and Administrative Support Workers	1,289	648	128	\$26.89	High school diploma
Financial Managers	1,066	367	91	\$59.69	Bachelor's degree
Managers, All Other	790	196	69	\$44.10	Bachelor's degree
Project Management Specialists	706	343	58	\$43.33	Bachelor's degree
Management Analysts	642	297	62	\$43.48	Bachelor's degree
Construction Managers	526	213	43	\$40.39	Bachelor's degree
Training and Development Specialists	490	252	48	\$30.41	Bachelor's degree
Industrial Production Managers	419	112	39	\$57.86	Bachelor's degree

Description	2023 Jobs	2023 Hires	Avg. Annual Openings	Median Hourly Earnings	Typical Entry- Level Education
<b>Computer and Information Systems Managers</b>	393	144	36	\$63.77	Bachelor's degree
<b>Secretaries and Administrative Assistants, Except Legal, Medical, and Executive</b>	1,955	1,226	214	\$20.02	High school diploma or equivalent
<b>Office Clerks, General</b>	3,317	2,211	395	\$19.15	High school diploma or equivalent

Institutions of higher education can best support economic growth in their region by enhancing education and training in these types of cross-sectoral occupations with context. Although some fields such as construction management may be housed under the school of construction rather than business, many of the occupations listed in Figure 30 are housed in the college of business. Work-based learning opportunities may support the contextualization of curricula, better preparing students to enter into high-growth industries in the Quad Cities as productive and efficient employees.

**Figure 30. Projected Fastest-Growing Management and Business Occupations, 2024–2029**



Sources: U.S. Bureau of Labor Statistics; Lightcast, Q1 2024; management and business administration occupations displayed by six-digit SOC code.

### Equity Findings: Management and Business Administration

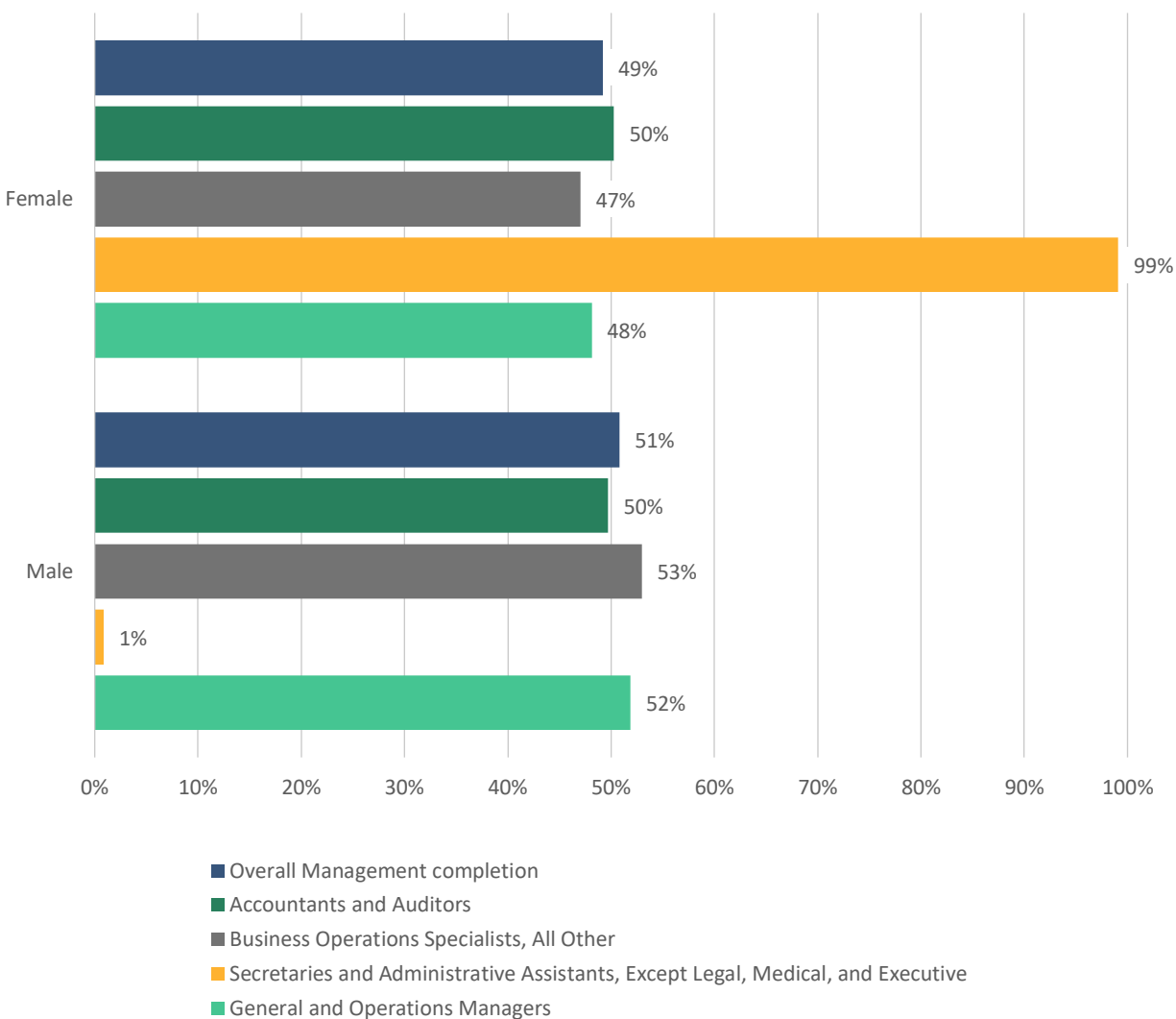
Business management and operations are high-demand occupations based on annual U.S. BLS data for hires and openings, while also providing living wage career trajectories. While completions in corresponding fields are fairly equitable with regard to gender, racial and ethnic completions demonstrate a disproportionate impact, as seen in Figures 31 and 32. Completions in corresponding business management, operations, and finance and accounting fields for Hispanic/Latino and Black/African American students are substantially lower—with overall

completions at 10 percent and 9 percent, respectively—than for students identifying as White at 71 percent.

On-ramps to business programs that meet students where they are, such as integrated education and training at community colleges or noncredit short-term programming with associated industry credentials, is an evidence-based practice used to support success of students from historically marginalized populations. These approaches support the integration of contextualized basic skills and begin to remove barriers that exist for students of lower income levels.

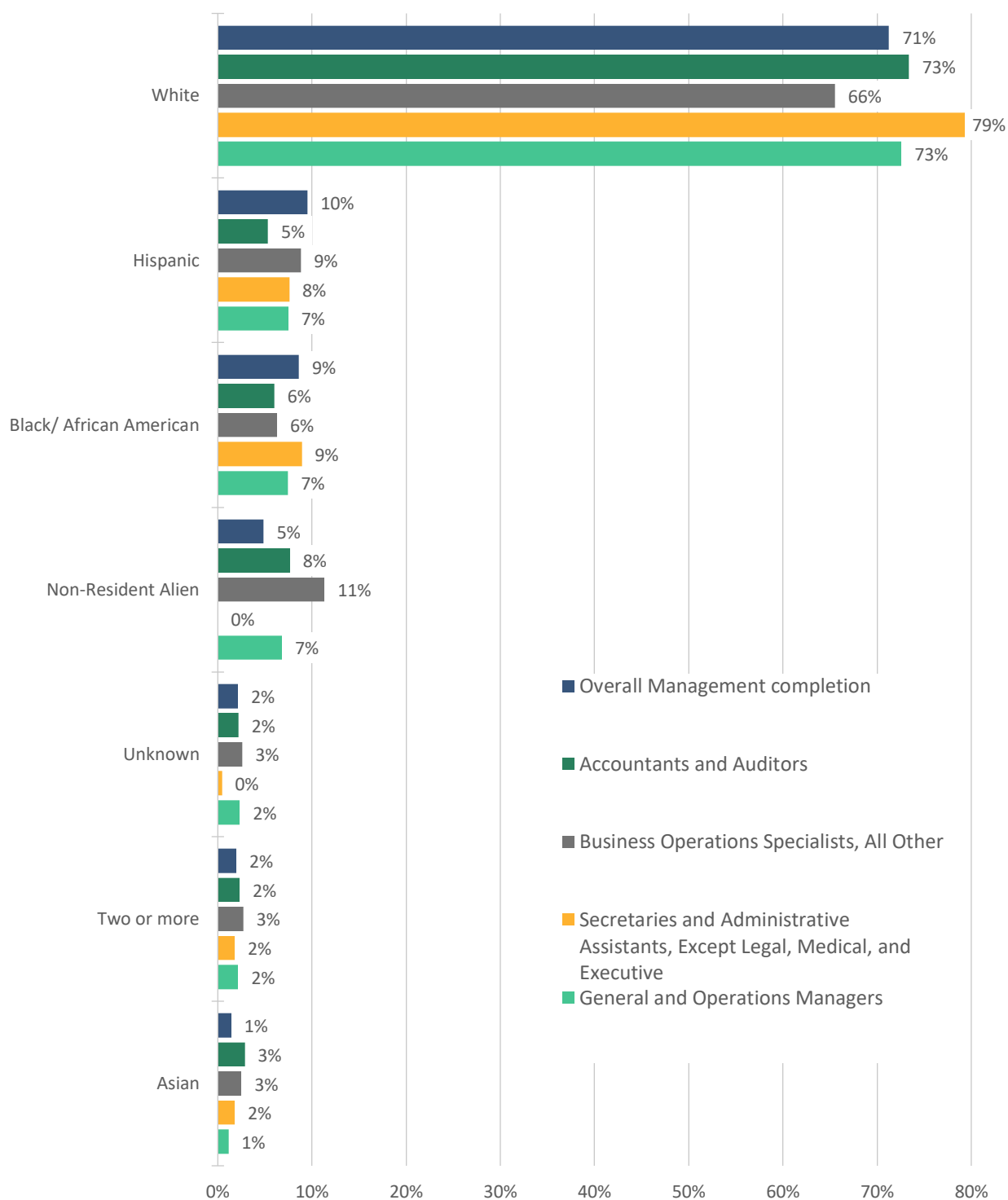


**Figure 31. Completion by Gender and Largest Occupations in Management**



Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

**Figure 32. Completion by Race, Ethnicity, Non-resident Status, and Largest Occupations in Management**



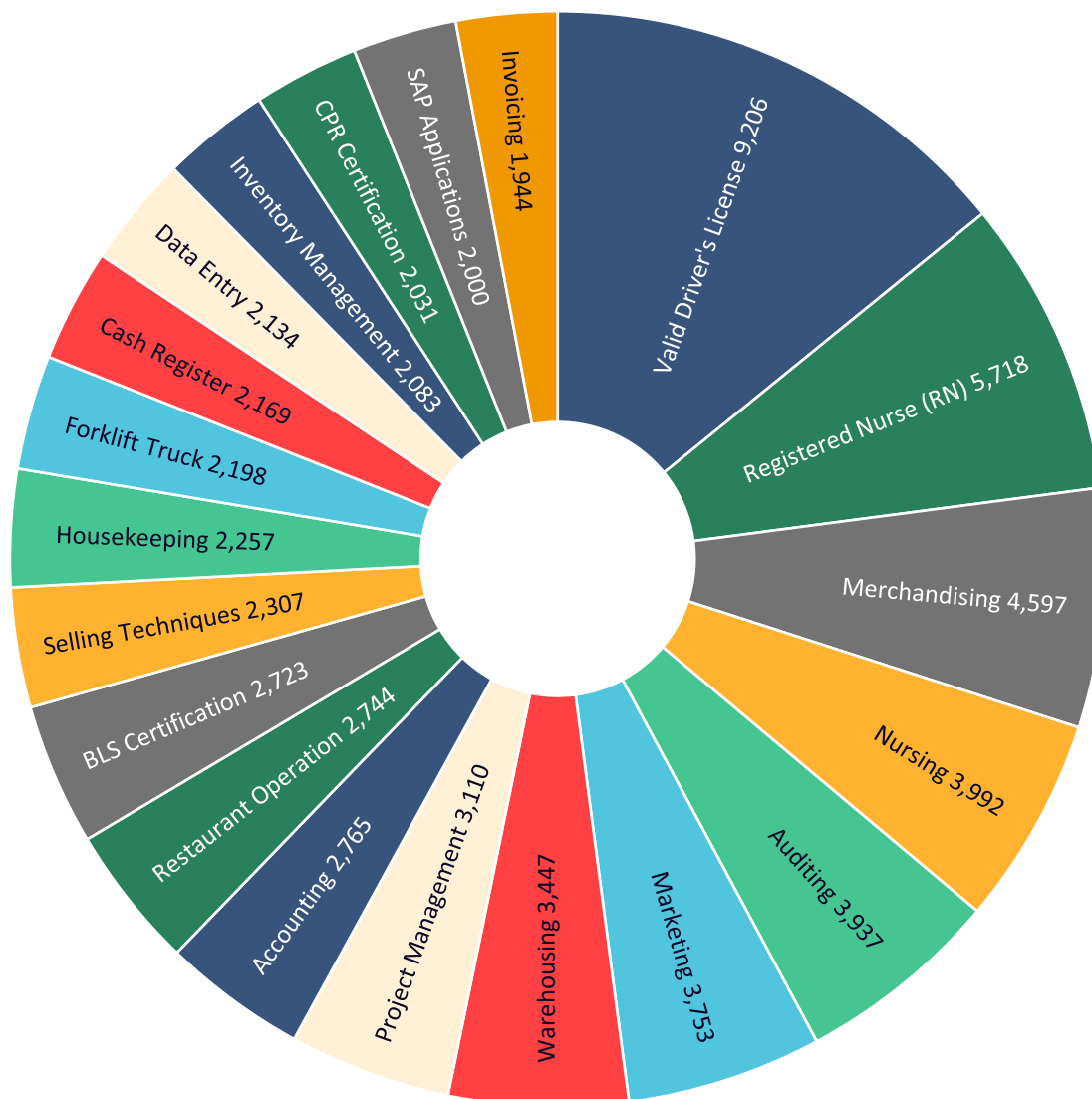
Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2018–2022, awards/degrees by program (CIP), award level, race/ethnicity, and gender. Retrieved April 16, 2024, from [nces.ed.gov/ipeds](https://nces.ed.gov/ipeds).

## **Skills Demand**

To gain a general idea of high-demand skills in the Quad Cities region (not including soft skills), specialized and software skills were assessed using data derived from job postings through Lightcast's Job Posting Analytics, which were cross-referenced with employer input garnered through the industry survey in the Quad Cities. Specialized and software skills through Lightcast's Job Posting Analytics are based on real-time labor market information derived from job postings in the Quad Cities region from January 2023 to January 2024. Software skills are of particular importance across all sectors with the advancement and application of technology and automation in almost all sectors and subsectors. The findings reflect a high-demand for specialized and software skills in project management, nursing sciences, and accounting, as well as for a variety of skills related to digital technology that flow across sectors, including Microsoft Office, data science, general automation, Power BI, and programming languages.

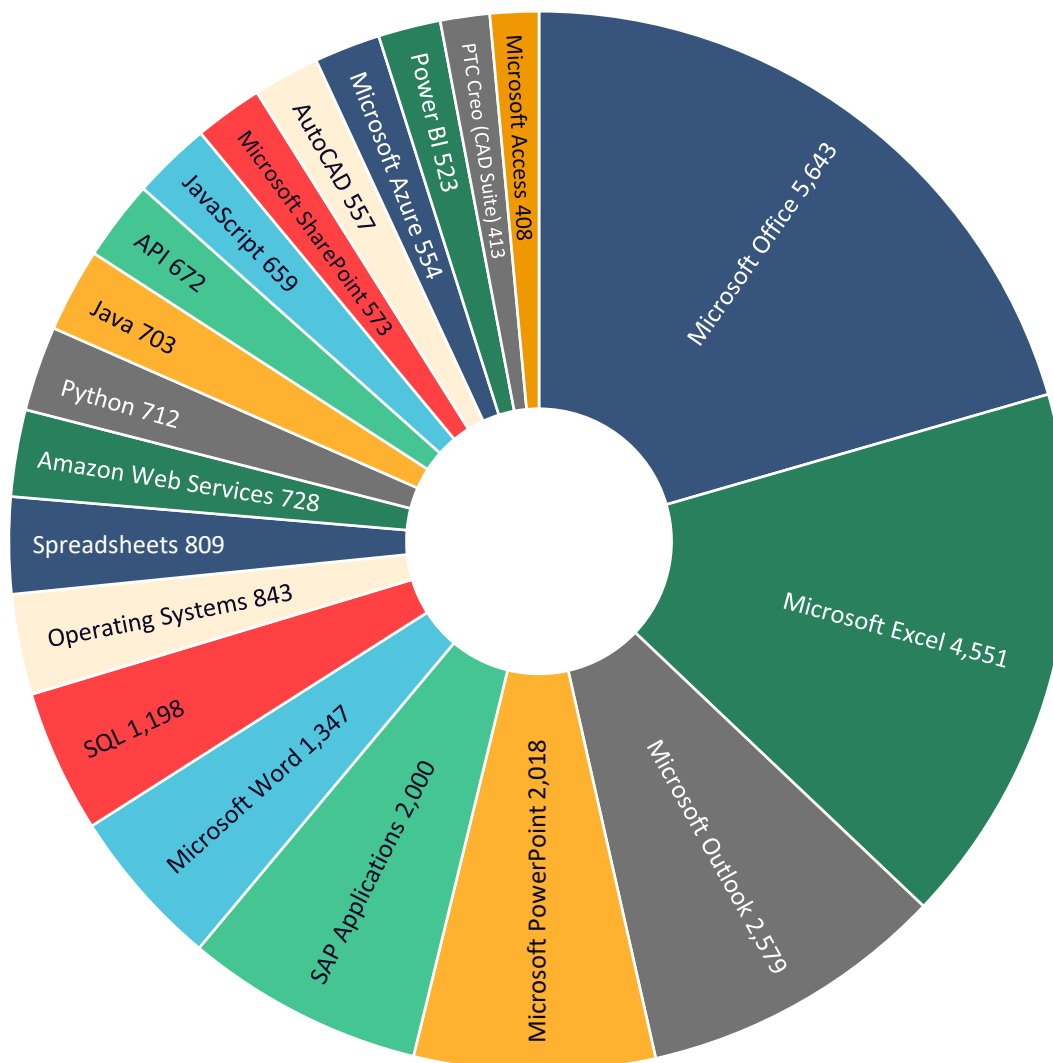
Figure 33 displays the specialized skills and the number of times that the skills were used in unduplicated job postings over one year. Figure 34 displays the high-demand software skills posted in jobs for the same time period with the number of times the skill was used in unduplicated job postings.

**Figure 33. Most Frequently Posted Specialized Skills, January 2023–January 2024**



Source: Job Posting Analytics, Lightcast, January 2023–January 2024.

**Figure 34. Most Frequently Posted Software Skills, January 2023–January 2024**

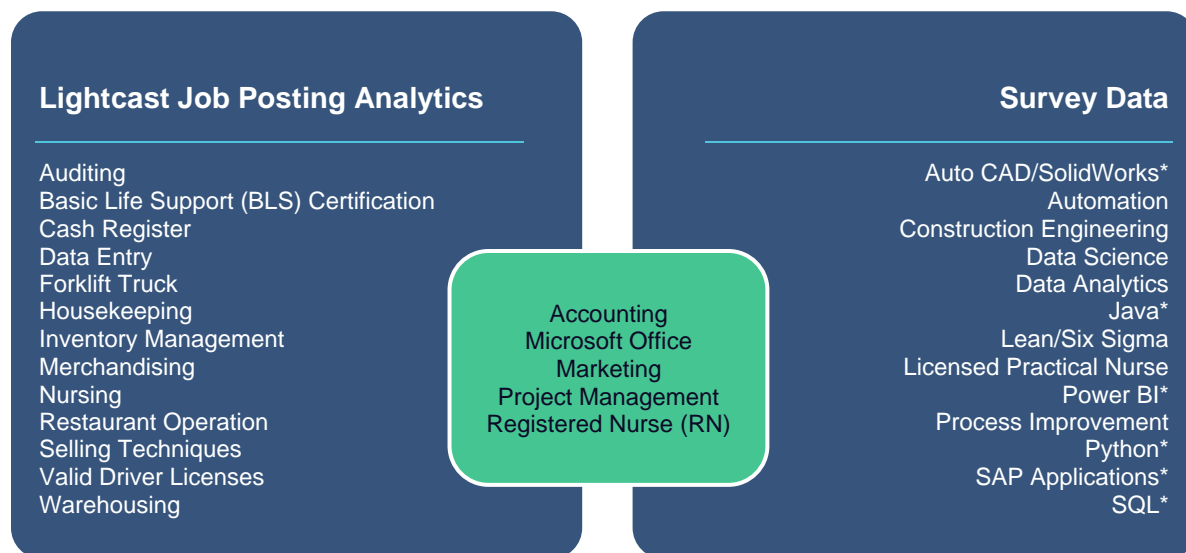


Source: Job Posting Analytics, Lightcast, January 2023–January 2024.

In order to validate demand, the Lightcast Job Posting Analytics skills were cross-referenced with input garnered through the industry survey in the Quad Cities. Figure 35 displays the specialized skills found in unduplicated job postings over one year on the left, with employer survey input on high-demand skills on the right. The skills located in the center circle were common across both job postings and employer input.

This industry response validated the high-demand skills found in job postings over the past year and further delineated the level of position aligned with each specialized skill (Figure 36).

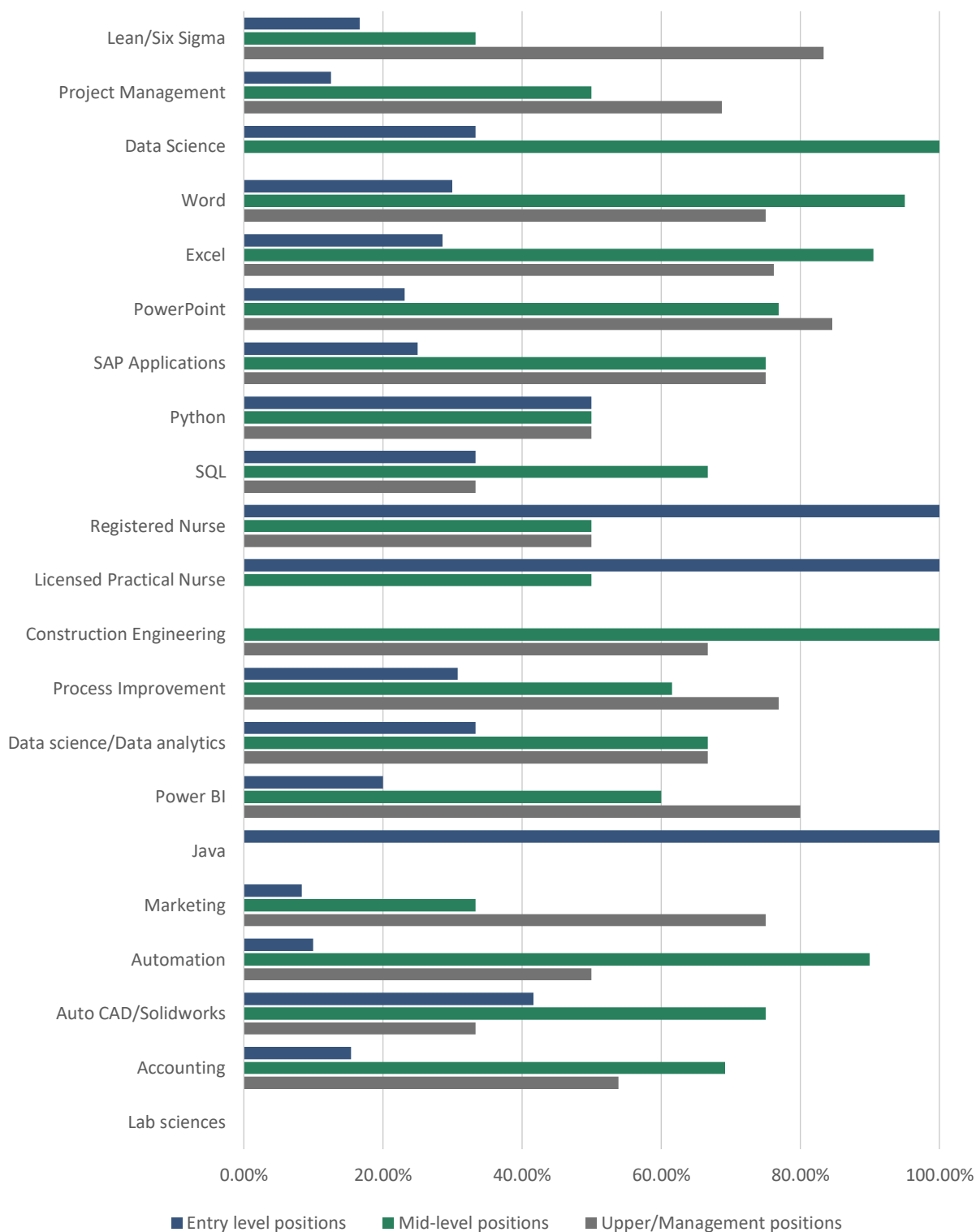
**Figure 35. High-Demand Skills in Job Postings and Industry Survey**



\*Indicates survey responses listed in Figure 36.

Source: Lightcast Analyst 2024. Skills listed in job postings, April 2023–April 2024. Skill type filter: Specialized, Certificate, and Software.

**Figure 36. Quad Cities Employer Survey Results, Skills Needed (N=27)**



## Educational Programs and Pathways

Regional analysis of educational pathways must consider the degree to which institutions work in balance with one another. To do so, the WestEd team explored the connections among K–12 career and technical education, community college awards, university awards, and the Quad Cities labor market. This analysis is distinct from the supply and demand analysis, though complementary in that it demonstrates intersegmental alignment that may explain the root cause of postsecondary workforce misalignments.<sup>15</sup> The data sources used in the analysis were drawn from multiple sources, including the following:

- K–12 career and technical education concentrators: Illinois (2022–2023), Iowa (2021–2022)
- Higher education completions: Black Hawk 2022–2023 from Illinois Community College Board (ICCB); Western Illinois University–Quad Cities 2022–2023 from Illinois Board of Higher Education (IBHE)
- All other institutions (Augustana College, Capri College, Eastern Iowa Community College District, La James International–Davenport, Orion Technical College, Palmer College of Chiropractic, Ross College, Saint Ambrose University, Trinity College of Nursing and Health Sciences) 2021–2022 from IPEDS
- Clusters from Advance CTE
- 2023 employment from Lightcast Q1 2024 data release

The following section addresses findings for K–12 CTE concentrators in Quad Cities, postsecondary awards across 11 postsecondary institutions (including the five core institutions highlighted in this report), and regional employment by cluster. The Perkins V definition<sup>16</sup> of a CTE concentrator is a student at the secondary school level who has completed at least two courses in a single CTE program or program of study.<sup>17</sup> The section then demonstrates pathway

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15 This analysis is also distinct from the supply and demand analysis in that it examines the proportion of activity across career clusters. The supply and demand analysis provides the size of workforce shortages or labor surpluses, while this analysis informs the relative distribution of employment and educational activity.

16 In Perkins V, the term “CTE concentrator” means (a) at the secondary school level, a student served by an eligible recipient who has completed at least two courses in a single career and technical education program or program of study; and (b) at the postsecondary level, a student enrolled in an eligible recipient who has (i) earned at least 12 credits within a career and technical education program or program of study, or (ii) completed such a program if the program encompasses fewer than 12 credits or the equivalent in total (Section 3(12) of Perkins V). This means that once a student completes two courses in a single CTE program of study, they are counted as a CTE concentrator.

17 See the Illinois definition of a CTE concentrator here: Illinois Community College Board. (n.d.). *Postsecondary perkins online data system (PODS)*, “CTE concentrator.” <https://www2.iccb.org/pods/other/cte-concentrator>

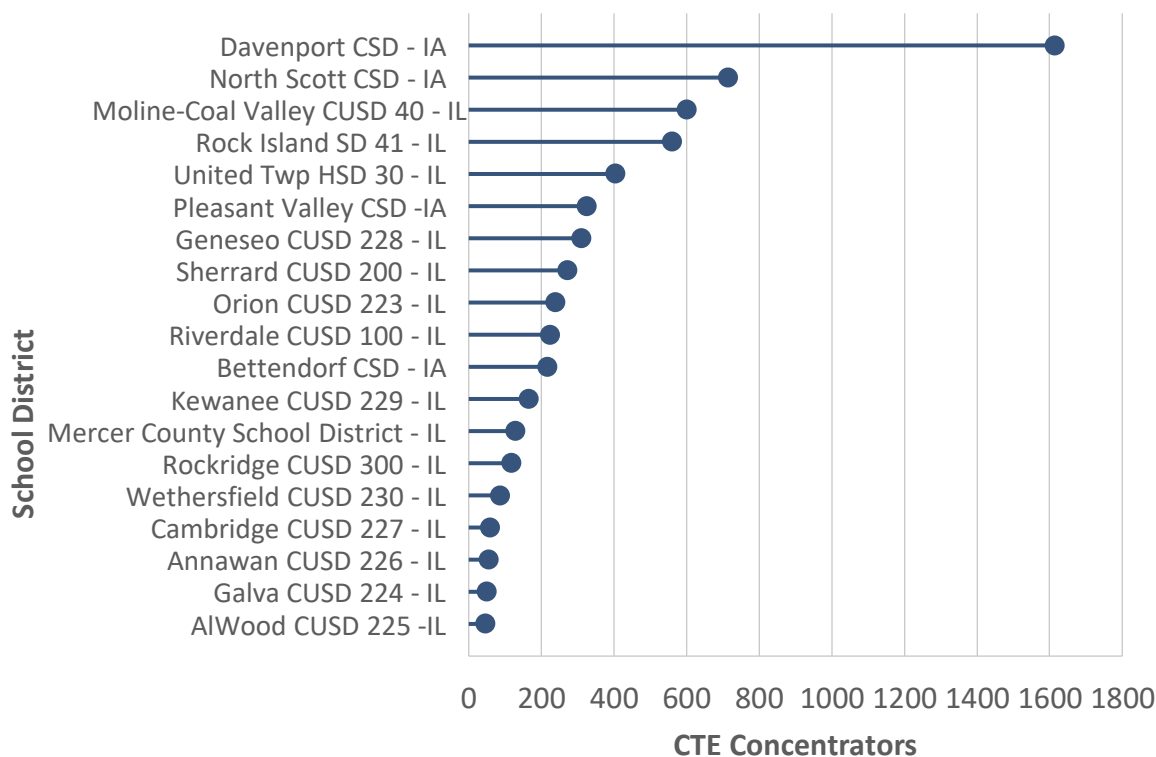


alignment and concludes with a key strategy that might help address any gaps or opportunities highlighted in both the mapping analysis and engagement activities.

## K–12 CTE Concentrators by District and Clusters

CTE concentrators are divided between Iowa and Illinois, with 46 percent in Iowa and 54 percent in Illinois for the Quad Cities region. Figure 37 shows the number of CTE concentrators by district within the Quad Cities area. The greatest numbers of CTE concentrators are at the Davenport Community School District (CSD), North Scott CSD, and Moline-Coal Valley Community Unified School District (CUSD). Smaller districts, such as the Cambridge CUSD, are located in rural areas of the Quad Cities where matriculation rates tend to be lower. Fostering collaborative relationships between K–12 and higher education should include representation from both larger and smaller districts to help balance and distribute the scope and reach of collaborative outcomes and engagement.

**Figure 37. CTE Concentrators by District in the Quad Cities**

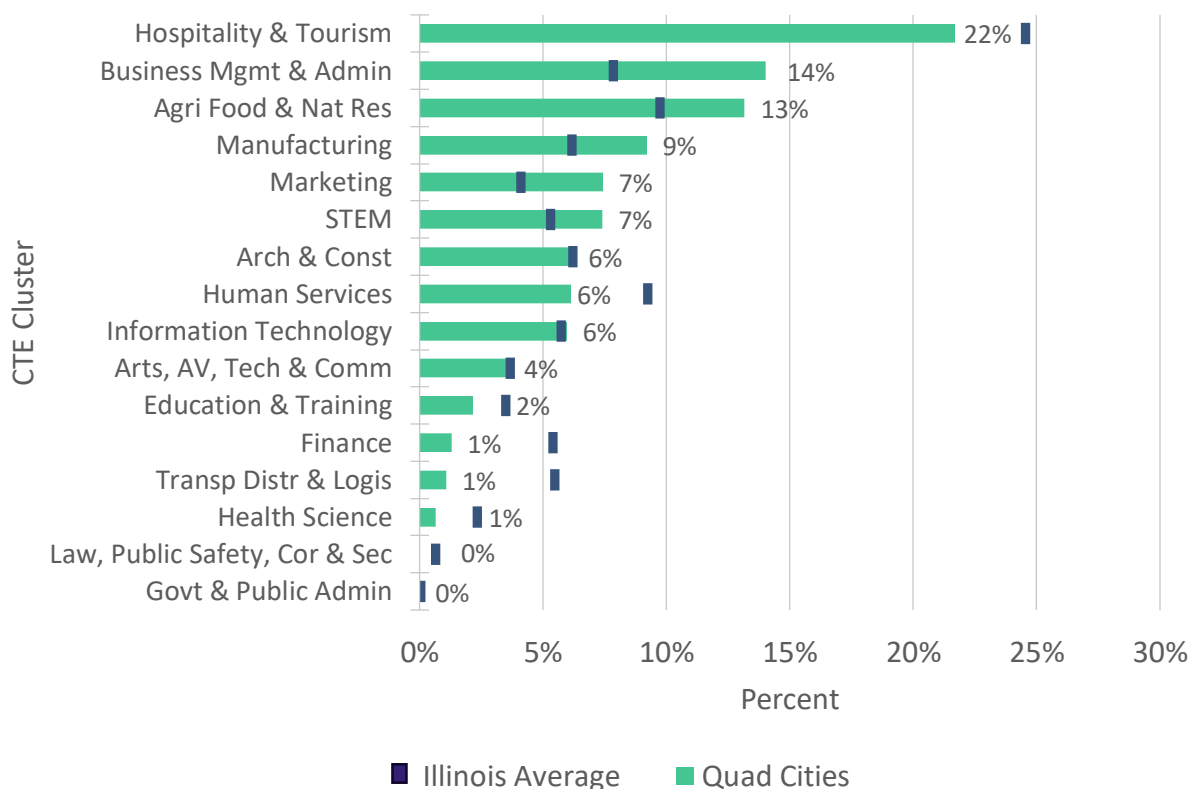


Sources: Illinois State Board of Education, Illinois Report Card; Iowa Department of Education, Division of Community Colleges and Workforce Preparation, Dashboard.

Across school districts in the Quad Cities, the hospitality and tourism cluster represents the largest group of CTE concentrators. Quad Cities has a higher proportion of students in hospitality and tourism (22 percent of its concentrators), above the Illinois state average, but when combined regionally with Iowa CTE concentrators, it is below the Illinois state average (see Figure 38). In the Illinois portion of the Quad Cities, 30 percent of concentrators are in hospitality and tourism. Based on this analysis a reduction of concentrators in hospitality and tourism in the Illinois portion of the Quad Cities may be warranted with a re-alignment towards higher-wage and demand clusters.

Notably, some clusters that align with the Quad Cities economy have a higher proportion of students than the Illinois state average, such as agriculture and manufacturing. These clusters are above the Illinois state average, at 13 percent and 9 percent, respectively. There may be opportunity for improvement, however, as transportation lags behind the state average while being a critical industry in the Quad Cities economy.

**Figure 38. CTE by Cluster in the Quad Cities and Illinois**



Sources: Iowa Department of Education, Division of Community Colleges and Workforce Preparation, Dashboard; Illinois State Board of Education, Illinois Report Card.

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## Matriculation and Workforce Readiness

Addressing the rates at which students transition to postsecondary education and their level of preparedness for the rigors of postsecondary academics is an important consideration when analyzing workforce systems. Data from the Illinois Report Card for 2022–2023 suggests that there is opportunity for improvement on both matriculation rates and postsecondary readiness to address workforce needs in the Quad Cities. As it relates to postsecondary readiness, more than 60 percent of high schools in the Illinois portion of the Quad Cities, which account for 85 percent of the area’s enrollments, have levels of community college math remediation below the 50th percentile for Illinois. Further, those high schools accounted for 85 percent of the area’s high school enrollments. Findings are similar for graduates enrolling in a postsecondary institution within 12 months. There is some improvement for graduates enrolling in a four-year institution where less than half of the high schools are below the 50th percentile for Illinois, but similarly, these high schools account for 68 percent of the area’s enrollments. Improving matriculation and postsecondary readiness is not exclusively reliant on K–12 institutions in the Quad Cities, as postsecondary institutions can enable change through robust partnership and improving accessibility and affordability.

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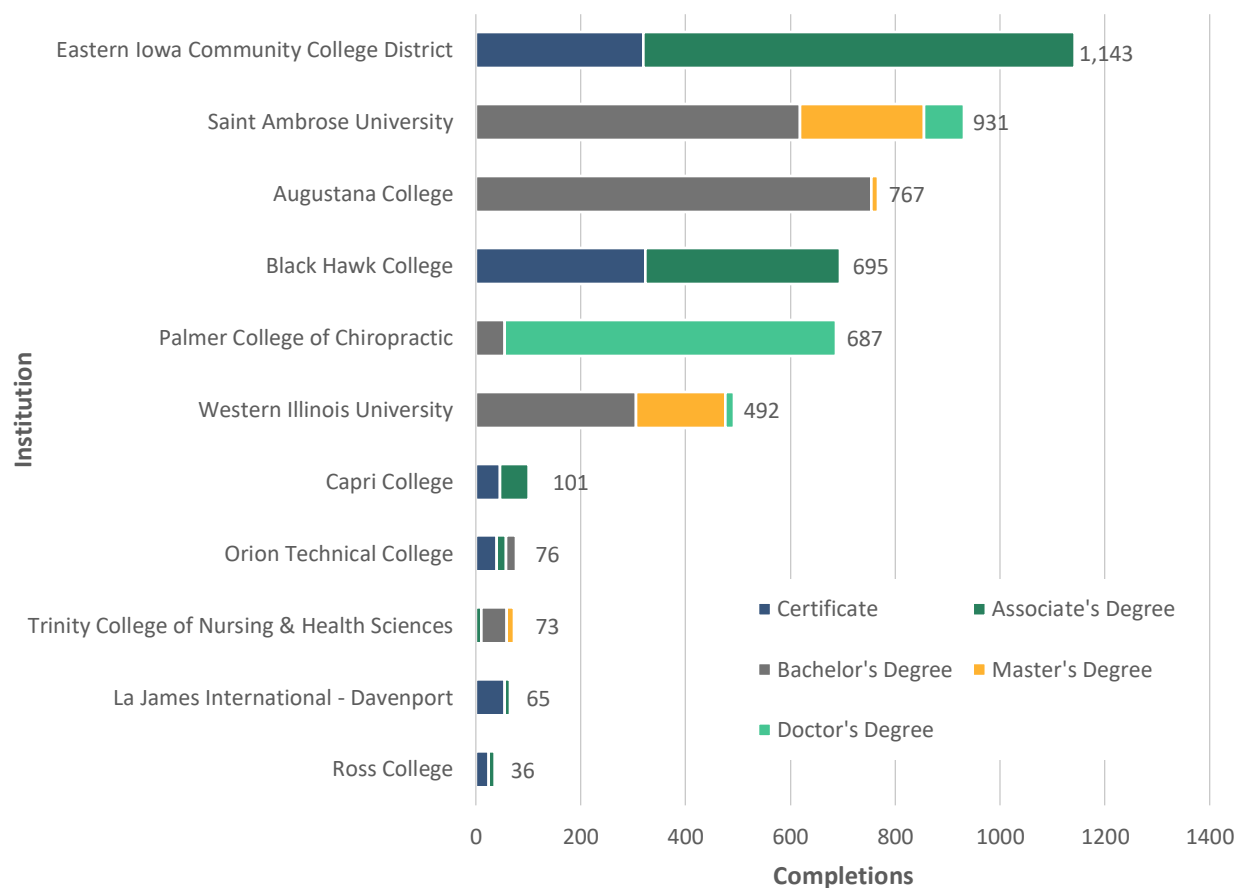
## Postsecondary Awards by Institutions and Clusters in the Quad Cities

A broad sweep of 11 postsecondary institutions in the Quad Cities shows that Eastern Iowa Community College District (EICC) awards the most degrees and certificates in the region (see Figure 39). EICC had 1,143 completers in 2021–2022, of whom 72 percent completed with an associate’s degree. Saint Ambrose University and Augustana College follow, with 931 and 767 completers, respectively. Private institutions account for 54 percent of completions in the Quad Cities, while public institutions account for the remainder of completions (46 percent). The Quad Cities region has a unique mixture of institutions, demonstrated by the percentage of high school graduates who enroll in private postsecondary institutions.<sup>18</sup>

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18 Illinois State Board of Education. (2022). *Illinois report card*. <https://www.illinoisreportcard.com/>

**Figure 39. Postsecondary Awards by Institution in the Quad Cities**

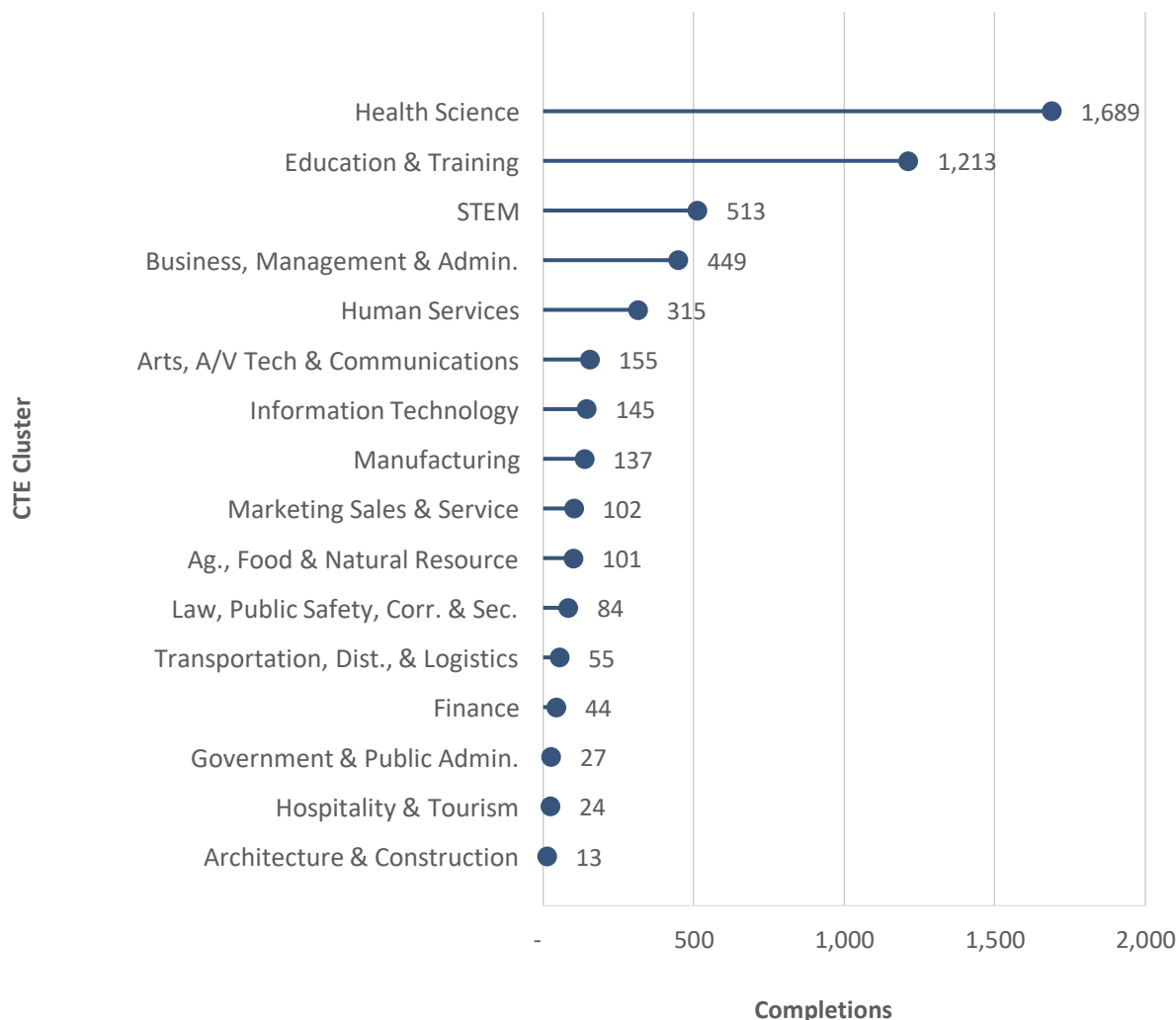


Sources: IPEDS, IBHE, ICCB.

Across all institutions shown in Figure 40, health science had the most completions, followed by education and training and STEM.<sup>19</sup> It should be noted that Palmer College of Chiropractic awards a significant number of degrees in the health science cluster. For public institutions, the education and training category is the largest cluster, followed by health science and business, management, and administration. Within education and training, a large portion of completers receive degrees or certificates in liberal arts and sciences from EICC or Black Hawk College. Public institutions contribute significantly to the number of awards produced in some clusters; for example, 104 of the 137 completions for manufacturing were at public institutions. On the other hand, only 135 of the 513 completions in the STEM cluster were at public institutions.

<sup>19</sup> The STEM cluster includes programs such as biological and physical sciences, exercise science and kinesiology, mechanical engineering, applied mathematics, economics, and anthropology.

**Figure 40. Postsecondary Awards by Cluster in the Quad Cities**



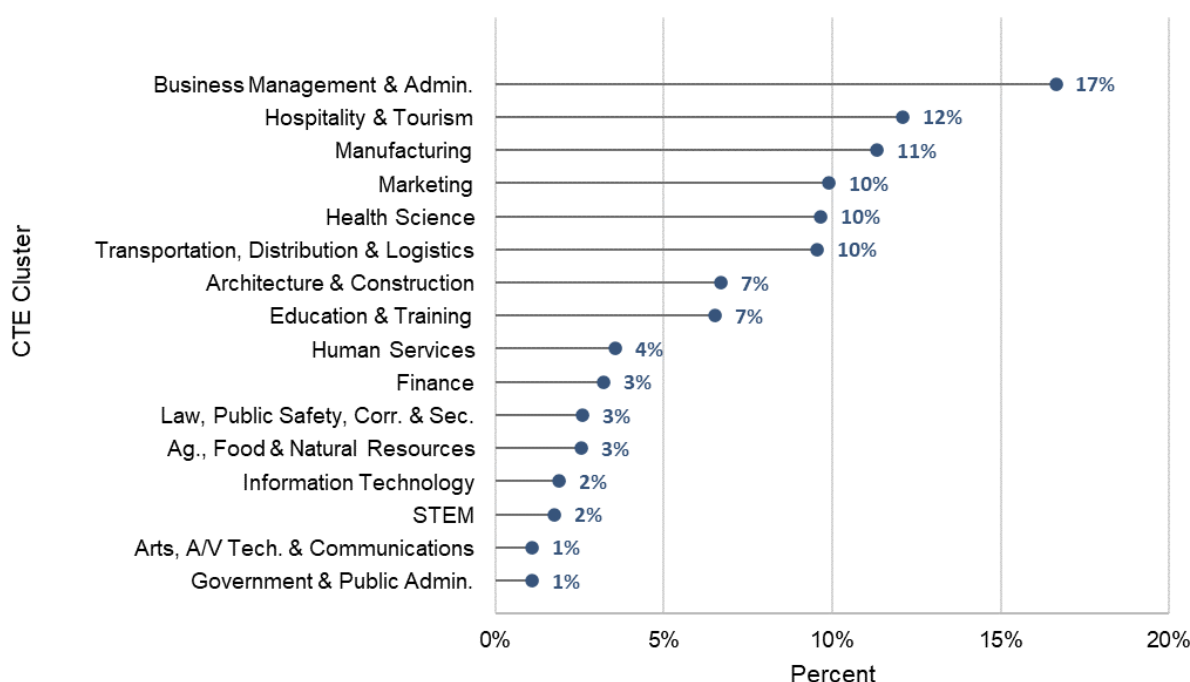
Sources: IPEDS, IBHE, ICCB.

## Employment by Clusters

In the Quad Cities, the largest proportion of jobs by cluster in 2023 was in business, management, and administration as shown in Figure 41. Employment for occupations related to this cluster accounted for 17 percent of jobs. This was followed by hospitality and tourism, and then by manufacturing. Note that the clusters shown represent groupings of occupations rather than industries. While business, management, and administration is the largest cluster for employment, the occupations grouped in this cluster work in a wide range of industries, from manufacturing to health care. The educational requirements of these clusters can range significantly; occupations within STEM, for example, typically require a bachelor's degree or

above. On the other hand, most of the employment in hospitality and tourism typically requires a high school degree.

**Figure 41. Employment in the Quad Cities by Cluster**

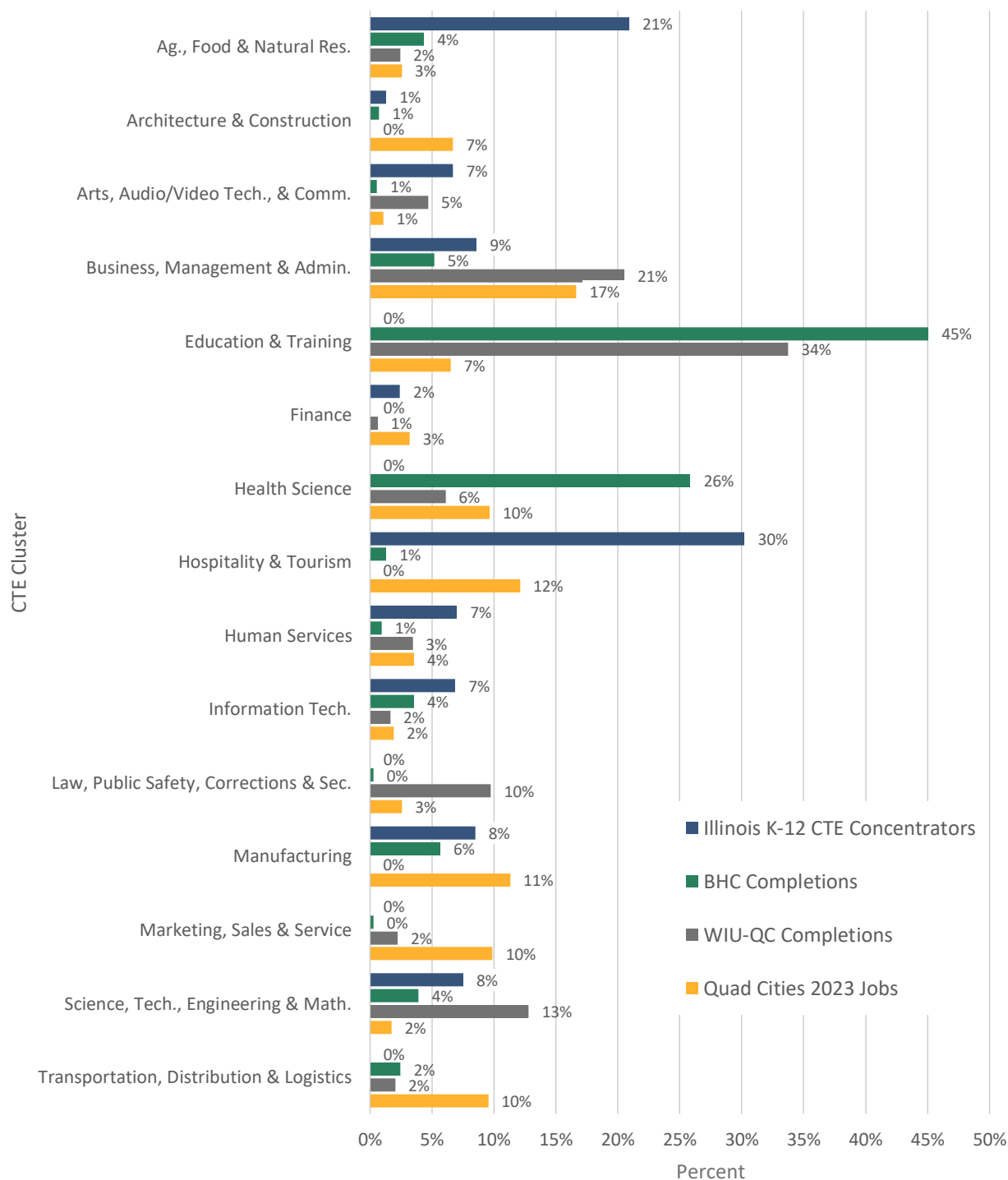


Source: Lightcast Analyst, Q1 2024 occupation data.

## Pathway Alignment: Illinois, Iowa, Quad Cities

Figure 42 demonstrates the alignment of Illinois K–12 CTE concentrators in the Quad Cities, Black Hawk College completers, and WIU–Quad Cities completers to the Quad Cities labor market. School districts in the Illinois portion of Quad Cities have CTE concentrators in 10 of the 15 career clusters; notably, there are no concentrators within education and training and health science. Black Hawk College has programs in 14 of the 15 career clusters shown, although completions are concentrated in the education and training and health science clusters, which account for 71 percent of completions. Similarly, WIU–Quad Cities has the majority of completions within two career clusters, education and training and business, management, and administration. Despite varying degrees of participation, every career cluster has participation from at least two educational systems, with six clusters having participation across all educational systems.

**Figure 42. Illinois Public Institution Pathway Alignment**



Sources: Illinois State Board of Education, Illinois Report Card; IBHE; ICCB; Lightcast Analyst, Q1 2024 occupation data.

Examining the pathway alignment between Iowa K–12 CTE concentrators in the Quad Cities, Eastern Iowa Community College (EICC), and the Quad Cities labor market (see Figure 43) shows that CTE concentrators in the Quad Cities are present in 12 of the 14 clusters shown, while EICC has completers in 13 of the 14 clusters. Similar to Black Hawk College in Figure 42, the majority of completions are in the education and training and health science career clusters. The most notable difference is the broad distribution of CTE concentrators across career clusters for Iowa’s school districts in the Quad Cities when compared with Illinois. CTE concentrators in Iowa also show increased alignment to employment within career clusters in the Quad Cities. The adoption of the Illinois PaCE Framework may positively impact students’ career exploration and course-taking to show greater alignment to the Quad Cities workforce for Illinois students.<sup>20</sup>

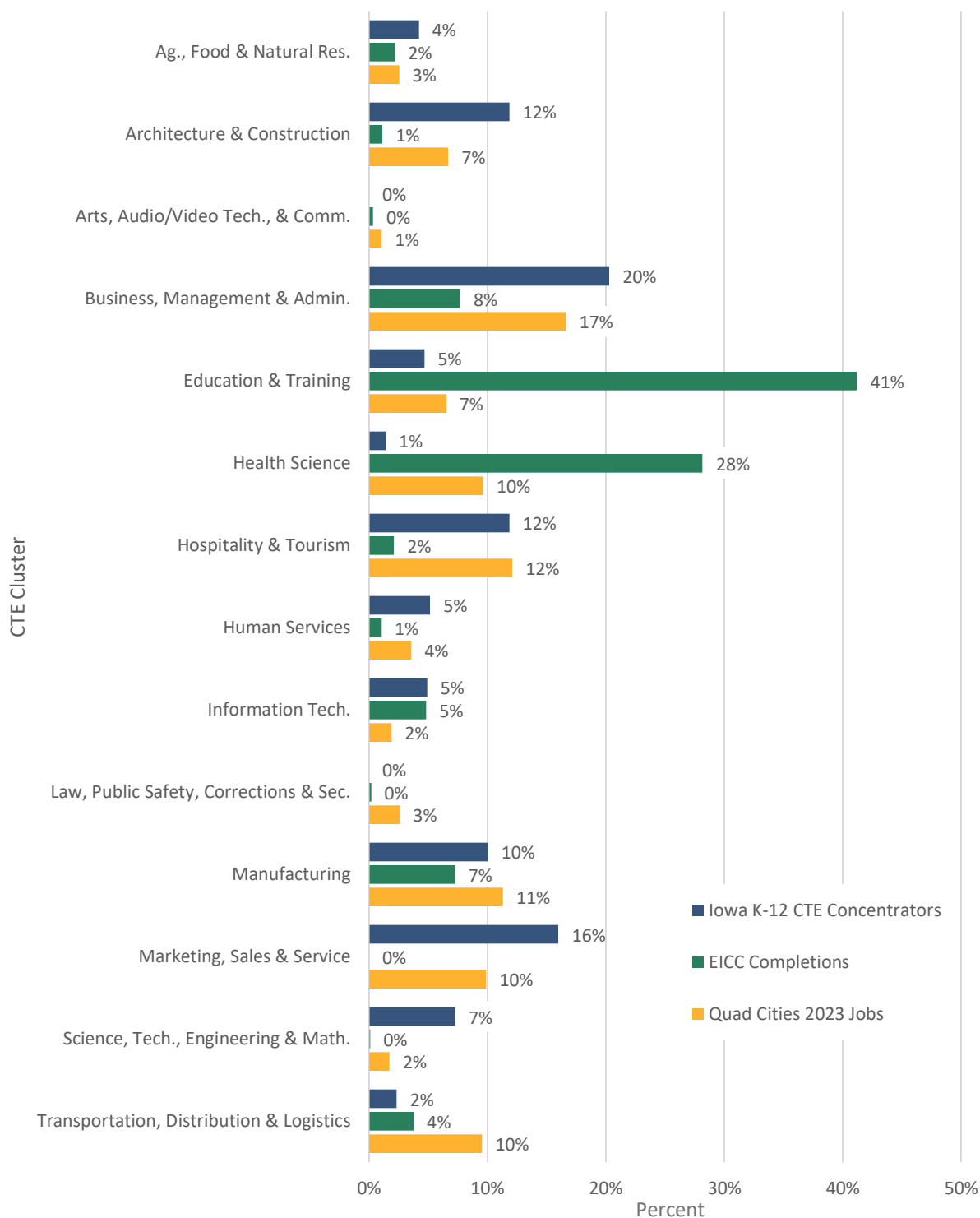
No public university is present in the Iowa portion of the Quad Cities, making transfer students reliant on WIU–Quad Cities and private institutions or requiring them to transfer to other areas to complete a bachelor’s degree. EICC and WIU–Quad Cities do have 2+2 agreements in place, though they are limited to business and public health programs. The narrow number of articulated transfer agreements between EICC and WIU–Quad Cities could impede students from continuing their education within the Quad Cities, contributing to a drain of human capital.

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20 Illinois Student Assistance Commission. (n.d.). *Illinois PaCE: Postsecondary and career expectations*.  
<https://www.isac.org/pace/>



**Figure 43. Iowa Public Institution Pathway Alignment**

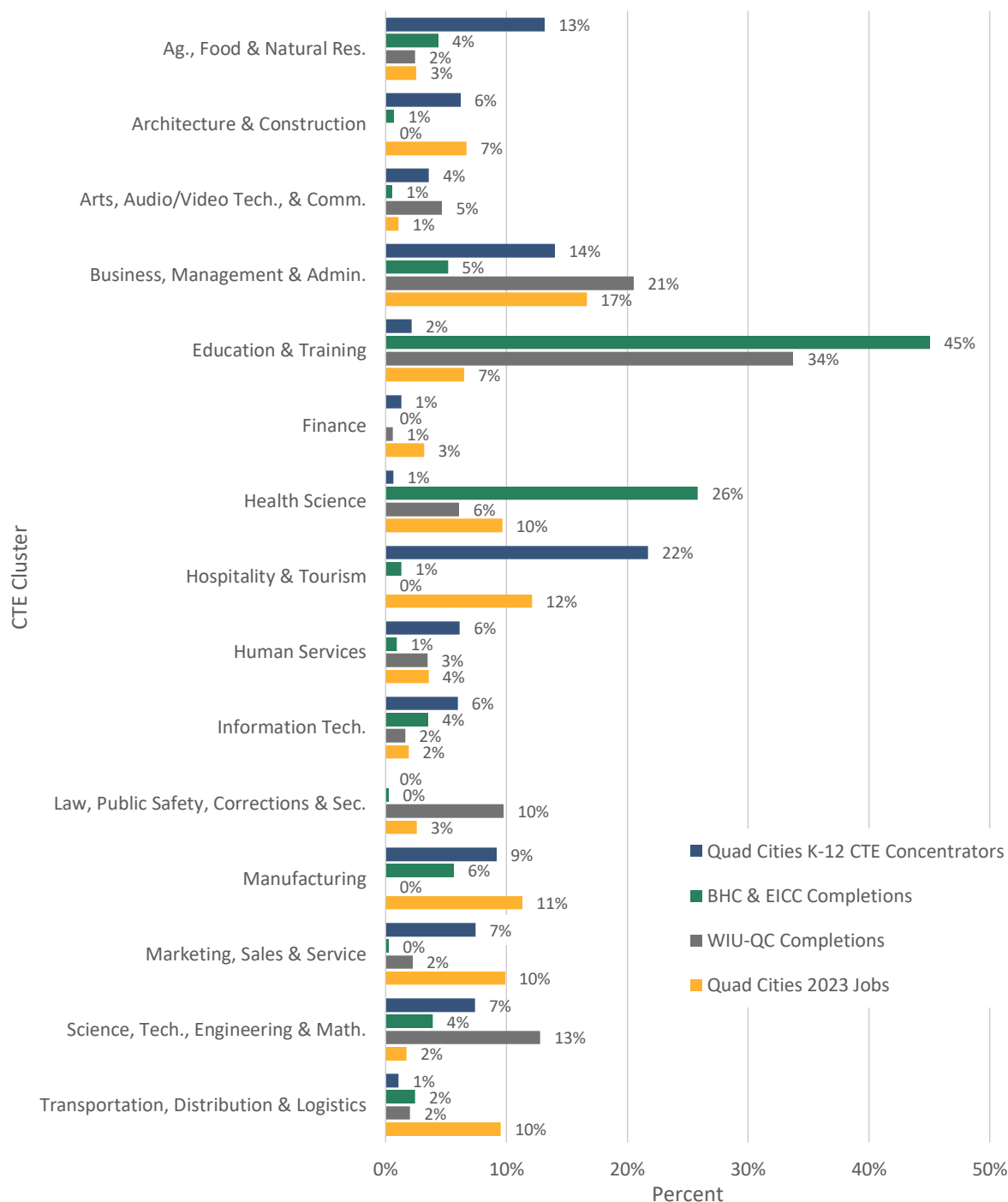


Sources: Iowa Department of Education, Division of Community Colleges and Workforce Preparation, Dashboard; IPEDS; Lightcast Analyst, Q1 2024 occupation data.

Finally, Figure 44 shows the pathway alignment between Quad Cities public institution K–12 CTE concentrators, EICC and BHC, WIU–Quad Cities, and the Quad Cities labor market. Differences in the proportions of students within each career cluster across educational systems can signal potential issues in the availability of programs. For example, between EICC and BHC, seven programs, classified by CIP code, are offered in the Quad Cities region, while WIU–Quad Cities offers only two programs. Similarly, 11 programs are offered in agriculture, food, and natural resources at EICC and BHC, while three are available at WIU–Quad Cities.

As a starting point, the analysis demonstrates that there are clusters within the Quad Cities economy and across educational institutions that may benefit from increased alignment, such as law, public safety, corrections, and security. Conversely, agriculture, food, and natural resources is a cluster that is aligned with the Quad Cities economy and has participation across education institutions. However, it is important to note that the analysis has constraints. As this is a proportional analysis, these findings are distinct from the supply and demand analysis that follows, which details the size of workforce shortages or labor surpluses. Additionally, the level of detail shown by examining career clusters does not provide the level of granularity necessary to examine and address specific postsecondary misalignments to the labor market.

**Figure 44: Quad Cities Public Institution Pathway Alignment**



Sources: Illinois State Board of Education, Illinois Report Card; Iowa Department of Education, Division of Community Colleges and Workforce Preparation, Dashboard; IPEDS; IBHE; ICCB; Lightcast Analyst, Q1 2024 occupation data.

## V. Postsecondary Workforce Analysis

Measuring employer demand and further workforce shortages quantitatively requires the use of multiple interconnected data sets. Known as supply and demand models, they seek to align workforce needs with available workers. One key pipeline of workers, which is primarily examined throughout this report, is postsecondary completers.

Supply, in this analysis, is measured as the average annual completions following the Classification of Instructional Programs (CIP) codes from postsecondary institutions in the Quad Cities. The data for the analysis was collected from multiple sources including from the Illinois Community College Board (ICCB), IBHE, and the Integrated Postsecondary Education Data System (IPEDS). This included data from 2019/20 through 2021/22, which was then averaged across the three years.

Data on demand was sourced from Lightcast, which derives their data from the U.S. Bureau of Labor Statistics (BLS). Using the Standard Occupational Classification (SOC) system, demand is measured as the number of average annual job openings by occupation. Average annual job openings consider the number of workers needed to fill the growth of an occupation over time and replace workers exiting an occupation. For this analysis, the time period covered is 2024–2029. The analysis is also informed by a CIP-to-SOC crosswalk, which also included deduplication processes. For each instance that a SOC code occurs in the regional CIP SOC crosswalk, a uniform weight has been assigned and used to adjust the average annual openings.

The rest of this section examines considerations to keep in mind when interpreting results from the analysis and presents the findings. More information on the data collected, methodology, and how to replicate methods can be found in Appendix A and Appendix G.

Additional views of the Quad Cities Industry, Occupation, and CIP SOC crosswalk can be viewed in [Quad Cities Regional Dashboard](#).

### Considerations

Interpreting the results of the postsecondary workforce analysis requires careful consideration of the sources of workers for employers, factors that may influence demand, and acknowledgment of the limitations related to the matching of these data sets. Although postsecondary institutions serve as a primary driver of the supply of skilled workers, there are additional ways that employers fill open roles. Recruitment of workers from outside the region or nation provides an external source of skilled workers that can be effective, particularly when regional shortages in

skilled labor exist. However, a number of data points suggest this option may not be utilized or effective for employers within the Quad Cities. Data from the U.S. Census Bureau’s Census Flows Mapper dataset for 2016–2020 shows that the Quad Cities had more outbound migration than inbound migration. Although this does not inform particular skill gaps, for employers within the Quad Cities, the data suggests employers have a diminished pool of workers to draw from.

In addition to historical migration, it is equally important to consider the current or anticipated movement of postsecondary completers who are serving as a pipeline of workers. One way to do this is to examine commuter data. Lightcast commuter data shows that the Quad Cities have more inbound commuters than outbound commuters. Inbound commuting can be explained by various factors, including employers filling skills gaps through talent recruitment from a larger geographical region. Occupations in architecture and engineering; arts, design, entertainment, sports, and media; and business and financial operations are the occupation groups with the highest proportion of net inbound commuters in the Quad Cities.

Within the region’s existing labor force, unemployed individuals also fill open roles. Table 11 displays the number of unemployed workers by occupation group in the Quad Cities. As shown, construction and extraction occupations are the largest occupation group with unemployed individuals, followed by production, transportation and material moving, and management. When interpreting the results of the supply and demand analysis, it is important to consider to what extent these unemployed individuals may contribute toward filling the demand that exists. The data in Table 11 suggests there is a relatively limited pool of unemployed individuals to draw from for occupation groups that typically have higher levels of education, such as legal, education instruction and library, healthcare practitioners and technical, computer and mathematical, and architecture and engineering occupations. Although unemployment data can help interpret the findings of this analysis, other sources for which data is more difficult to collect could contribute to the supply of workers. These include individuals out of the labor force or marginally attached to the labor force, such as discouraged workers.

**Table 11. Unemployment by Occupation Group in the Quad Cities**

SOC	Occupation	Unemployed (Feb. 2024)
<b>47-0000</b>	Construction and Extraction	2,740
<b>51-0000</b>	Production	1,017
<b>53-0000</b>	Transportation and Material Moving	838

SOC	Occupation	Unemployed (Feb. 2024)
11-0000	Management	698
37-0000	Building and Grounds Cleaning and Maintenance	569
43-0000	Office and Administrative Support	451
41-0000	Sales and Related	417
49-0000	Installation, Maintenance, and Repair	413
13-0000	Business and Financial Operations	318
35-0000	Food Preparation and Serving Related	313
45-0000	Farming, Fishing, and Forestry	211
17-0000	Architecture and Engineering	143
15-0000	Computer and Mathematical	112
31-0000	Healthcare Support	112
29-0000	Healthcare Practitioners and Technical	107
33-0000	Protective Service	68
27-0000	Arts, Design, Entertainment, Sports, and Media	66
25-0000	Educational Instruction and Library	66
39-0000	Personal Care and Service	64
21-0000	Community and Social Service	45

SOC	Occupation	Unemployed (Feb. 2024)
19-0000	Life, Physical, and Social Science	28
23-0000	Legal	14
55-0000	Military-Only	3
99-0000	No Previous Work Experience/Unspecified	0

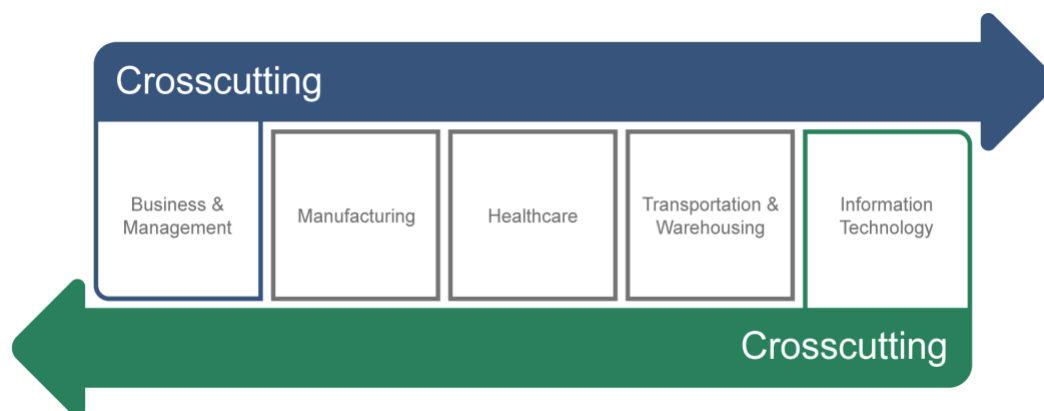
Source: Lightcast, Q1 2024.

## Postsecondary Programs and Workforce Shortages

Figure 46 displays the top 10 program areas, defined by their two-digit CIP code, with a workforce shortage in the Quad Cities. Shown in the figure are average annual job openings by program area and by education level and average annual completions by program area for institutions with offerings primarily at the baccalaureate level and above as well as institutions with offerings primarily below the baccalaureate level. As shown in the figure, the category of business, management, marketing, and related support services has the largest workforce shortage, followed by education; transportation and materials moving; and agricultural/animal/plant/veterinary science and related fields.

The program area of business, management, marketing, and related support services has the greatest demand in the Quad Cities and is the second-largest program area by average annual completions. The need for graduates from the program area can be explained by demand for these skills in nearly every industry, whereas other program areas may provide graduates exclusively for a few industries within the Quad Cities. Figure 45 illustrates how both business and management and information technology are crosscutting sectors that supply graduates to a range of sectors that utilize these skills.

**Figure 45. Illustrative Example of Cross-cutting Priority Sectors**



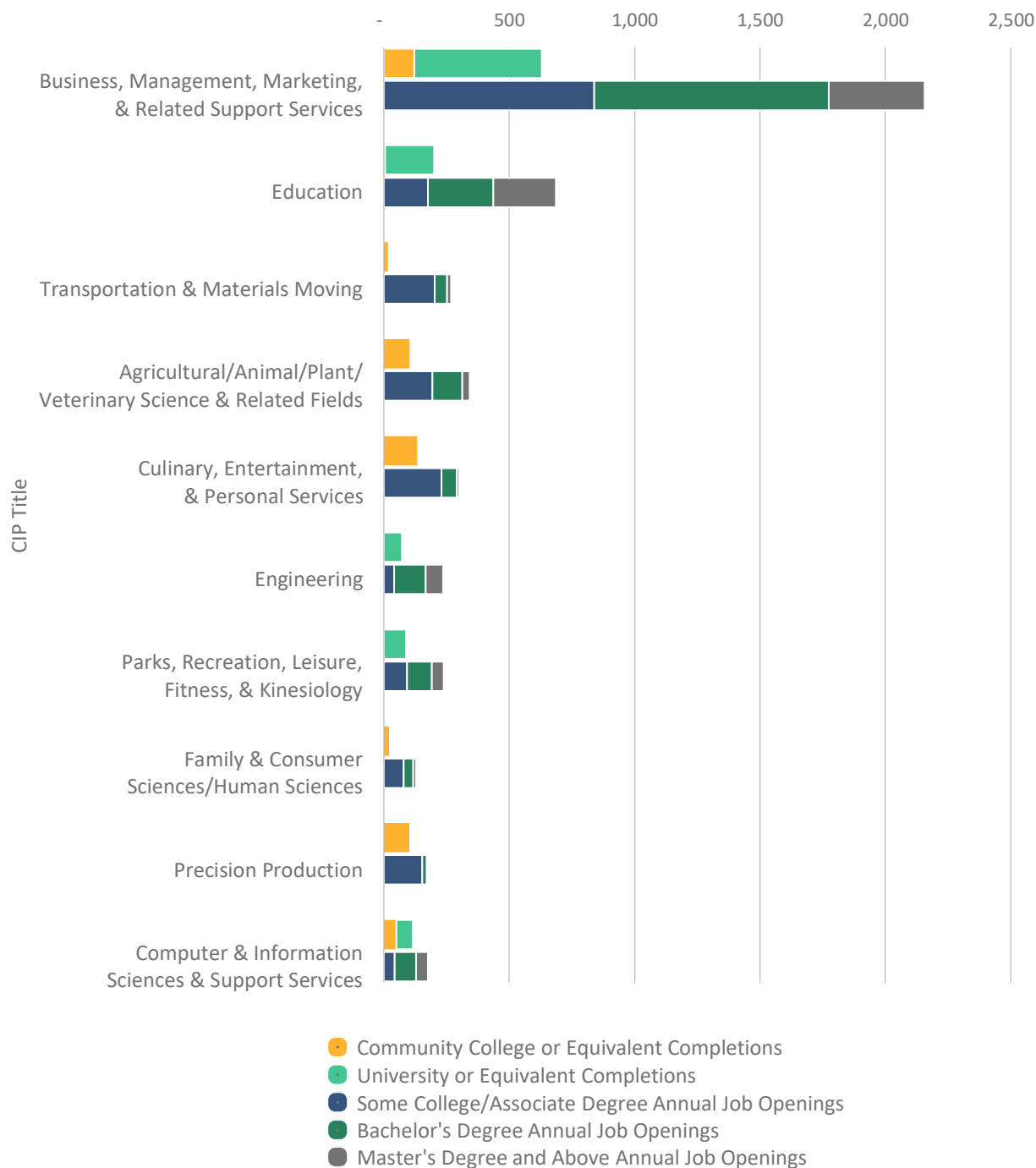
Analysis of the inferred education level of the average annual job openings cross walked to the program areas reveals which institutions may need to adjust their operations to fill existing skill gaps. For example, 90 percent of the average annual job openings for transportation and materials moving are at the associate's degree level and below, whereas 77 percent of the average annual job openings for engineering are at the bachelor's degree level and above.

While examining the results at the level of program area is useful for understanding broad areas that may have workforce misalignments, a closer analysis is needed to understand the skill gaps that exist and how they can best be redressed (see *Skills Gap Assessment* on page 118). The additional figures in this section examine, at the six-digit CIP level, existing workforce shortages for the Quad Cities key clusters: health care; manufacturing; wholesale trade, transportation, and warehousing; information and digital technology; and management and business administration.

Figures 46 – 51 below are repeated from Figures 1 – 6 at the top of the report where the WestEd team provided an overview of the workforce shortage findings. Below, additional analysis and contextual recommendations are provided for each.



**Figure 46. Top 10 Program Areas With a Workforce Shortage**



Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

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## Addressing Workforce Misalignments

Initiatives without a career-specific focus may have larger impacts on workforce misalignments by affecting a broader group of learners. Identifying workforce misalignments provides interest groups with opportunities to target gaps. For example, practitioners in the Quad Cities across education segments and industry sectors should develop strategies that promote workforce accessibility, awareness, and engagement. **John Deere's welding apprenticeships program** and similar programs serve as a local model of how an employer is working to expand career accessibility and increase students' awareness earlier in educational trajectories. Similarly, adopting ISBE's model program of study for machining may help address employer demand for machinists in the Quad Cities.<sup>21</sup> Additionally, improving college readiness for high school graduates, particularly in mathematics, can provide them with skills that make programs such as engineering and computer and information sciences more accessible to them.

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## Health Care

Figure 47 displays the top 10 programs in health care with a workforce shortage. Health care has been defined as all six-digit CIP codes falling under 51.0000, Health Professions and Related Programs. As shown in the figure, nursing assistant/aide and patient care assistant/aide occupations have the largest workforce shortage, followed by medical insurance specialist/medical biller, medical office management/administration, and health/health care administration/management.

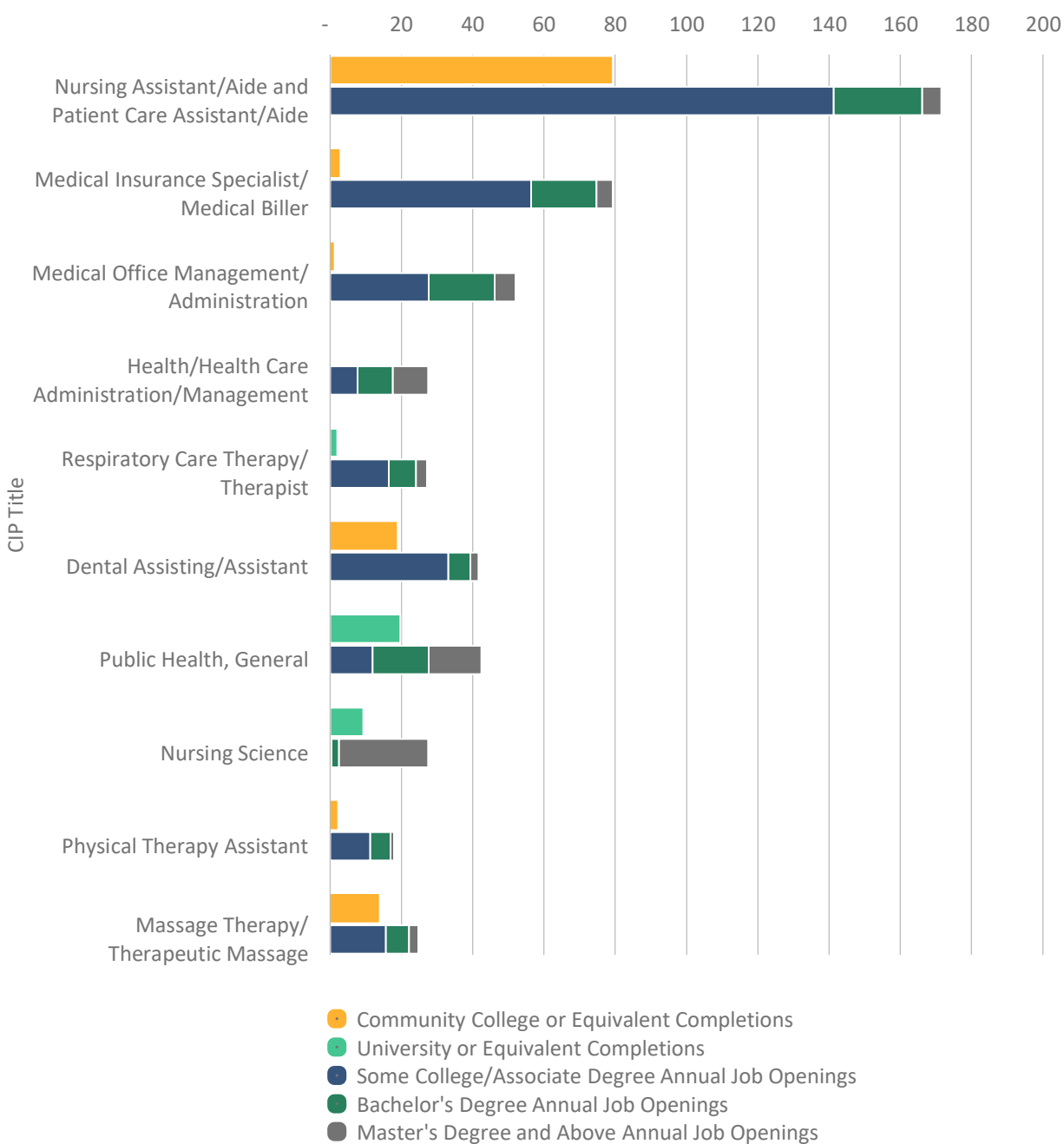
Within the top 10 programs experiencing a workforce shortage, there is clearly a demonstrated need for administrative and managerial roles; given the education levels for these roles, this is a need that may best be served through the region's community colleges. Other critical health care programs show need within the Quad Cities, including respiratory care therapy/therapist and nursing science. Of the 29 health care programs offered in the Quad Cities, 17 produce more completers than average annual job openings. An excess of completions relative to job openings in a program is not necessarily indicative of a workforce misalignment as some completers may migrate out of the region, work outside of their field of study, or take time to match with employers. The top three programs with an excess of completion relative to job openings are chiropractic, registered nursing/registered nurse, and health information/medical records technology/technician. Programs with testing and licensure requirements, such as

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21 Illinois State Board of Education. (n.d.). *Machining program of study*. <https://www.isbe.net/Documents/Machining-Model-Program-Study.pdf>

nursing science and registered nursing/registered nurse, can benefit from more specialized supply and demand models that account for additional variables, including exam pass rates.

**Figure 47. Health Care: Top 10 Postsecondary Programs With a Workforce Shortage**



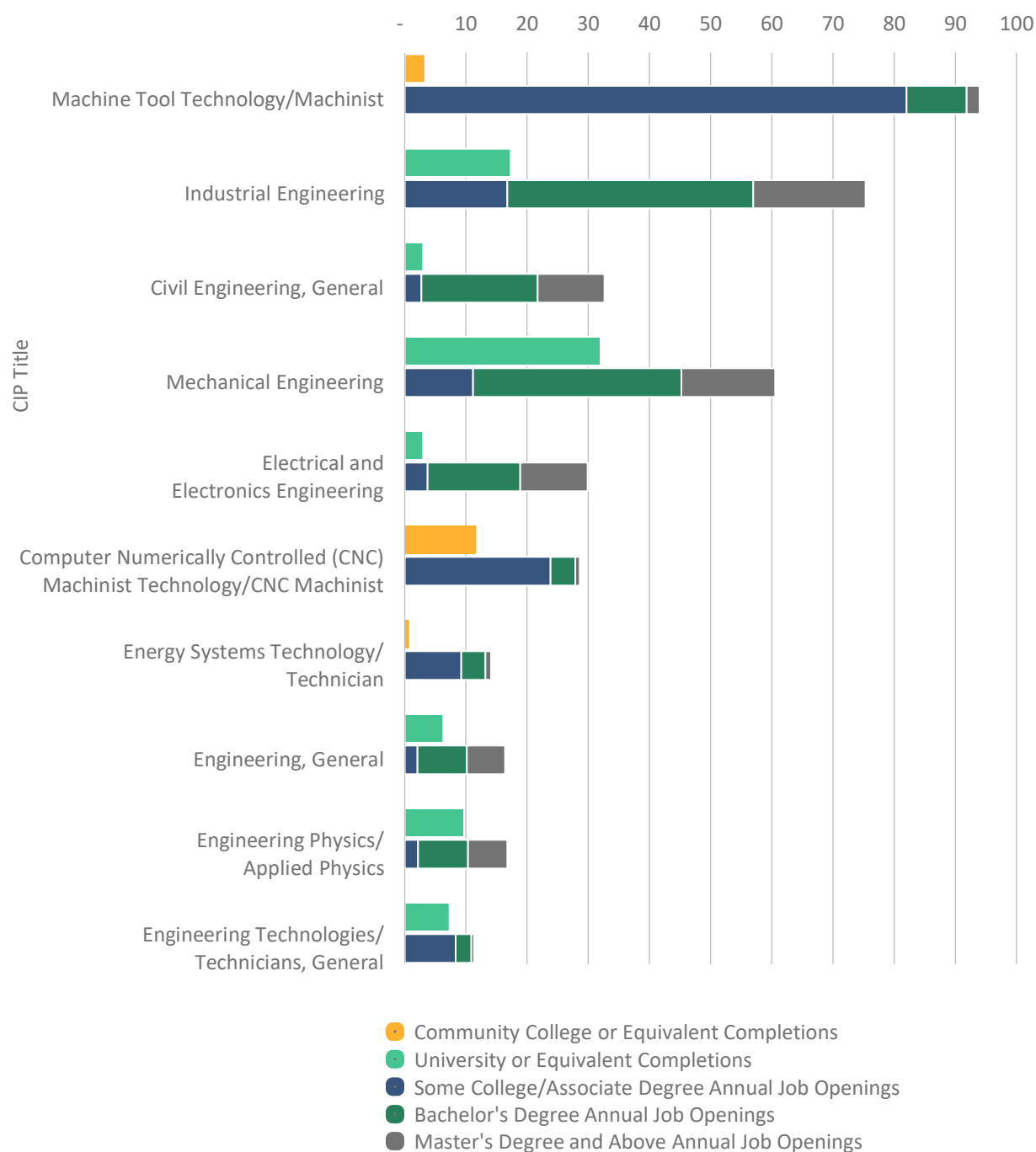
Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## Manufacturing

Figure 48 displays the top 10 programs in manufacturing with a workforce shortage. Manufacturing has been defined as all six-digit CIP codes falling under 14.0000 and 15.0000, which are engineering and engineering/engineering-related technologies/technicians, respectively. Additionally, three programs from CIP 48.0000, precision production, have been included. As shown in the figure, the machine tool technology/machinist category has the largest workforce shortage, followed by industrial engineering, civil engineering, and CNC machinist technology/CNC machinist.

The majority of programmatic workforce shortages are for engineering programs. Industrial engineering has the most prominent workforce shortage with 75 average annual job openings and 17 average annual completions, followed by civil engineering, and mechanical engineering. Civil engineering and electrical and electronics engineering have the fewest average annual completions relative to average annual job openings, both with approximately 1 completions per 10 job openings. Given the significant discrepancy between completions and job openings for these programs, institutions in the Quad Cities may consider prioritizing these programs over others to increase the pool of candidates available to employers.

**Figure 48. Manufacturing: Top 10 Postsecondary Programs With a Workforce Shortage**



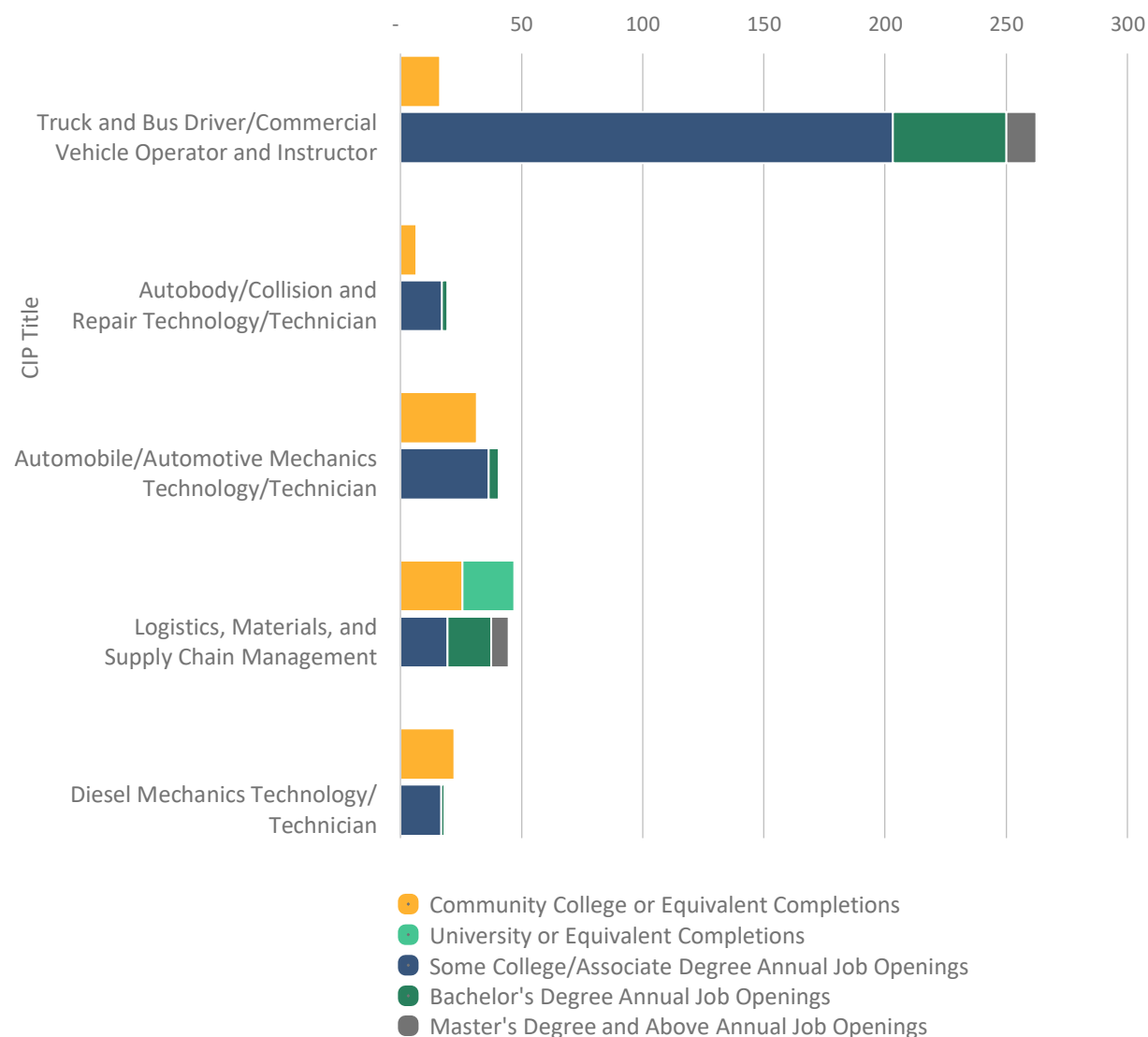
Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## **Wholesale Trade, Transportation, and Warehousing**

Figure 49 displays the results for programs in wholesale trade, transportation, and warehousing. The wholesale trade, transportation, and warehousing category has been defined as all six-digit CIP codes falling under 49.0000, transportation and materials moving. Additionally, three CIP codes from 47.0000, mechanic and repair technologies/technicians, and one from 52.0000, business, management, marketing, and related support services, have also been included. As shown in the figure, the truck and bus driver/commercial vehicle operator and instructor category has the largest workforce shortage, followed by autobody/collision and repair technology/technician and automobile/automotive mechanics technology/technician.

Two programs—logistics, materials, and supply chain management and diesel mechanics technology/technician—have additional completions relative to job openings, though as previously noted, completions in excess of job openings are not indicative of a workforce misalignment. The narrow difference in demand and supply likely suggests the Quad Cities workforce could support additional completions, though these programs are examples of postsecondary institutions aligning well with employer need.

**Figure 49. Transportation: Postsecondary Programs With a Workforce Shortage**



Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

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## Funding for Commercial Driver's License Programs to Address Needs

Many high-demand jobs in the region's transportation and logistics sector require a commercial driver's license (CDL), typically attained by workers 25 and older. Industry leaders in the region described unanimous frustration about the process of obtaining a CDL, including significant cost barriers to the employee. Recent grants allowed Iowa to invest \$4.8 million in grants to 10 community colleges, including Eastern Iowa Community College in the Quad Cities, to modernize infrastructure for CDL programs, aiming to expand training and increase access to high-demand jobs. This investment will fund new equipment and facility upgrades, enabling a significant increase in the number of drivers who can quickly move from classroom to employment. According to Iowa's Executive Director of Workforce Development, Beth Townsend, in the [Quad Cities Regional Business Journal](#), *"Increasing the CDL pipeline is crucial to sustaining and improving our economy. We are chronically short of drivers and Governor Reynolds' continued investment in our community colleges should help accomplish this goal."* Aligned with a prominent message heard at a manufacturing roundtable, this was described as a critical step to support the need in the Quad Cities region.

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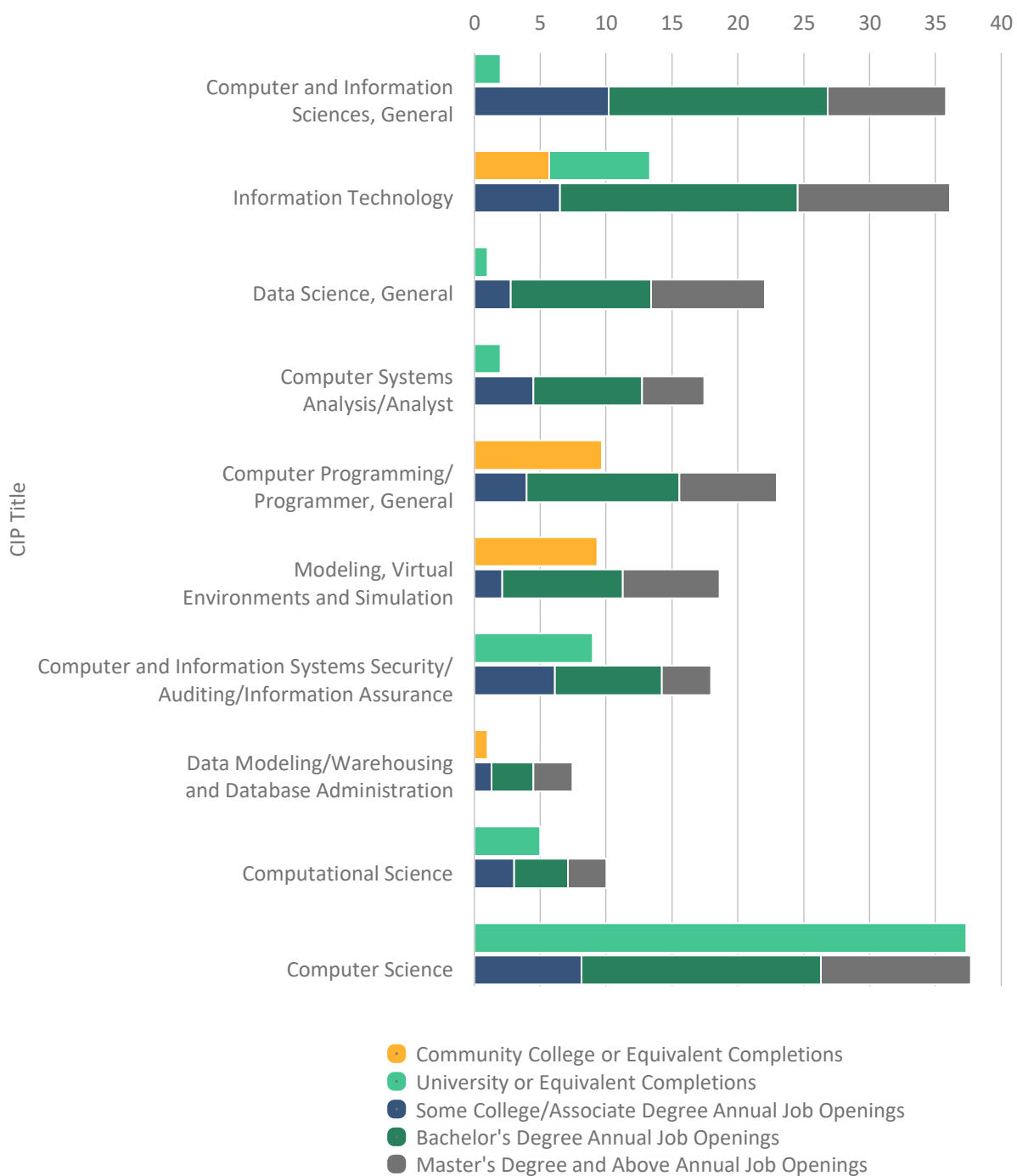
## Information and Digital Technology

Figure 50 displays the top 10 programs in information and digital technology with a workforce shortage. Information and digital technology have been defined as all six-digit CIP codes falling under 11.0000, computer and information sciences and support services. Additionally, two programs from CIP 30.0000, multi/interdisciplinary studies, have been included. As shown in the figure, the category of computer and information sciences, general has the largest workforce shortage, followed by information technology; data science, general; and computer systems analysis/analyst. Only two programs produce slightly more completers than job openings, indicating a broad shortage of talent within information and digital technology.

As shown in Figure 50, the majority of the demand is for completers at the bachelor's degree level and above, demonstrating the need for universities within the Quad Cities to produce the talent necessary to fill these shortages. The majority of completers come from private universities within the Quad Cities, which impedes students from accessing this workforce need through local public education pathways. For WIU-Quad Cities, program development within information and digital technology is an opportunity to further meet employer need while providing students with opportunities to access in-demand careers.



**Figure 50. Information and Digital Technology: Postsecondary Programs With a Workforce Shortage**



Source: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

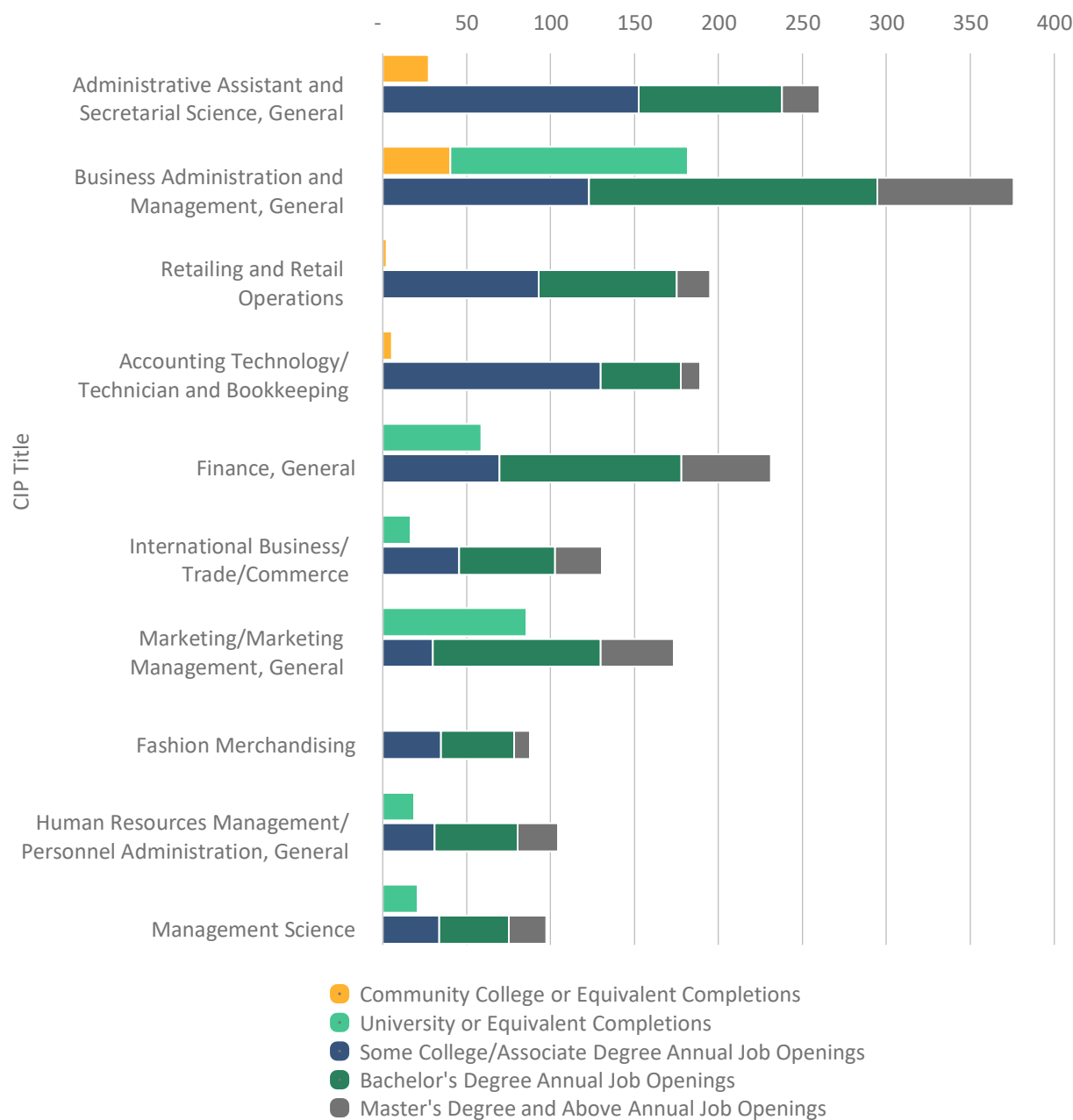
## **Management and Business Administration**

Figure 51 displays the top 10 programs in management and business administration with a workforce shortage. Management and business administration has been defined as all six-digit CIP codes falling under 52.0000, business, management, marketing, and related support services with the exception of one program included in the wholesale trade, transportation, and warehousing sector. As shown in the figure, administrative assistant and secretarial science, general has the largest workforce shortage, followed by business administration and management, general; retailing and retail operations; and accounting technology/technician and bookkeeping.

Since management and business administration crosses sectors, there is demand for completers in nearly every industry within the Quad Cities. Completers within programs outside of management and business administration that have few job openings may find their skills are transferable to careers within management and business, thereby addressing some of the workforce need for these programs, though the broader results of this analysis suggest that the number of completions may still not be sufficient to meet the workforce needs in management and business administration.

Analysis of the underlying occupations mapped to these programs is important for interpreting the findings. Specifically for administrative assistant and secretarial science, general, the program is mapped to first-line supervisors of office and administrative support workers, human resource assistants (except payroll and timekeeping), executive secretaries and executive administrative assistants, and secretaries and administrative assistants (except legal, medical, and executive). While EICC and BHC may be best suited to meet the demand for administrative assistants and human resource assistants, the region's universities could also play a key role in meeting the demand for first-line supervisors and executive secretaries.

**Figure 51. Business and Management: Top 10 Postsecondary Programs With a Workforce Shortage**



Sources: IBHE; ICCB; IPEDS; Lightcast, Q1 2024; WestEd analysis.

## Skills Gap Assessment

Ensuring education and training pathways exist is the first step to supporting economic mobility and regional economic growth. To enhance existing pathways within the system of higher education, research included the organization of top skills found through Lightcast Job Posting Analytics by field of study with alignment to potential occupations. The five tables below display high-demand specialized skills first by sector or occupational cluster, then by field of study. Each sector is divided into three categories: (a) skills demanded for entry-level occupations, (b) skills demanded for entry-middle skilled occupations, and (c) skills demanded for middle-advanced skilled occupations. The skills column does not align one-to-one with the occupation column; rather, the skills listed by level are a summary of all skills included for jobs at that particular level.

Each level also displays potential occupations that are aligned with the specific level of educational attainment as verified through Lightcast Job Posting Analytics. The list of occupations is reflective of the top demanded occupations identified in the deep dive section and is not exhaustive of all occupations. Identification of skills and educational attainment required for clusters of occupations within top industry sectors is fundamental to understanding skills gaps that may exist in existing curricula and academic programs. It is recommended that faculty within the broader program of study review the following tables/tools to verify that the in-demand competencies identified are captured in current curricula. Furthermore, these skills tables can be used to guide conversations with employers to verify in-demand skills and identify emerging skills needs to ensure that curricular content reflects industry needs.

### Health Care

Some of the high-demand related skills for entry-level occupations for the health care sector are specialized and certificate skills, such as caregiving, medical assistance, and housekeeping. These skills may be aligned with some of the following occupations, such as home health and person care aides, medical secretaries and administrative assistants, and psychiatric aides. Some of the high-demand related skills for middle-skilled occupations are specialized and certificate skills, such as certified nursing assistant, performance improvement, and evaluation care. These skills may be aligned with some of the following occupations, such as nursing assistants, occupational therapy assistants, and magnetic resonance imaging technologists. Some of the high-demand related skills for mid-advanced skilled occupations are specialized and certificate skills, such as workflow management, registered pharmacist (RPh), and inventory management. These skills may be aligned with some of the following occupations, such as medical and health services managers, registered nurses, and epidemiologists. To see the full list of specialized skills and certificate skills and occupations, please see the Table 12 below.

**Table 12. Health Care**

Entry-Level Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>High school diploma/GED; some college, no degree</b>	Caregiving	Home Health and Personal Care Aides
	Medical Assistance	Medical Secretaries and Administrative Assistants
	Certified Pharmacy Technician	Psychiatric Aides
	Medical Terminology	Medical Equipment Preparers
	Housekeeping	Physical Therapist Aides
	Billing	Opticians, Dispensing
	Data Entry	Pharmacy Aides
	Personal Care	Pharmacy Technicians
Entry-Middle Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Associate's degree; postsecondary, nondegree award</b>	Certified Nursing Assistant	Nursing Assistants
	Licensed Practical Nurse (LPN)	Medical Assistants
	Cardiopulmonary Resuscitation (CPR) Certification	Licensed Practical and Licensed Vocational Nurses
	Performance Improvement	Medical Records Specialists
	Quality Monitoring	Psychiatric Technicians
	Pediatrics	Health Technologists and Technicians, All Other
	Advanced Cardiovascular Life Support (ACLS) Certification	Phlebotomists
	Evaluation Of Care	Ophthalmic Medical Technicians
	Licensed Vocational Nurse (LVN)	Dental Assistants
		Paramedics
		Emergency Medical Technicians
		Health Information Technologists and Medical Registrars
		Surgical Technologists
		Medical Transcriptionists
		Physical Therapist Assistants
		Dental Hygienists
		Occupational Therapy Assistants

Respiratory Therapists  
Radiologic Technologists and  
Technicians  
Diagnostic Medical Sonographers  
Dietetic Technicians  
Cardiovascular Technologists and  
Technicians  
Magnetic Resonance Imaging  
Technologists

Middle-Advanced Required Educational Attainment	Specialized & Certificate Skills	Occupations
Bachelor's degree or higher	Workflow Management Patient Education and Counseling Registered Pharmacist (RPh) Care Coordination Geriatrics Inventory Management Nurse Practitioner (APRN- CNP) Medication Dispensation	Medical and Health Services Managers Registered Nurses Dietitians and Nutritionists Therapists, All Other Athletic Trainers Clinical Laboratory Technologists and Technicians Nurse Practitioners Physician Assistants Speech-Language Pathologists Occupational Therapists Epidemiologists Nurse Anesthetists

## Manufacturing

Some of the high-demand related skills for entry-level occupations for the manufacturing sector are specialized and certificate skills, such as carpentry, machine operation, and warehousing. These skills may be aligned with some of the following occupations, such as miscellaneous assemblers and fabricators, machinists, and packaging and filling machine operators and tenders. Some of the high-demand related skills for middle-skilled occupations are specialized and certificate skills, such as computer-aided design, electromechanics, and equipment repair. These skills may be aligned with some of the following occupations, such as heating, air conditioning, and refrigeration mechanics and installers, computer numerically controlled tool

programmers, and audiovisual equipment stallers and repairers. Some of the high-demand related skills for mid-advanced skilled occupations are specialized and certificate skills, such as auditing, cost reduction, lean manufacturing, and programmable logic controllers. These skills may be aligned with some of the following occupations, such as industrial engineers, buyers and purchasing agents, and health and safety engineers. To see the full list of specialized skills and certificate skills and occupations, see Table 13 below.

**Table 13. Manufacturing and Engineering Technologies**

Entry-Level Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>High school diploma/GED; some college, no degree</b>	Carpentry	Miscellaneous Assemblers and Fabricators
	Forklift Truck	Maintenance and Repair Workers, General
	Housekeeping	First-Line Supervisors of Production and Operating Workers
	Hydraulics	Welders, Cutters, Solderers, and Brazers
	Machine Operation	Inspectors, Testers, Sorters, Samplers, and Weighers
	Painting	First-Line Supervisors of Mechanics, Installers, and Repairers
	Safety Standards	Machinists
	Warehousing	Industrial Machinery Mechanics
		Packaging and Filling Machine Operators and Tenders
Entry-Middle Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Associate's degree; postsecondary, nondegree award</b>	Computer-Aided Design	Heating, Air Conditioning, and Refrigeration Mechanics and Installers
	Electromechanics	Tool and Die Makers
	Equipment Repair	Electrical and Electronics Repairers, Commercial and Industrial Equipment
	Machining	Computer Numerically Controlled Tool Programmers
	Materials Engineering	Audiovisual Equipment Installers and Repairers
	Test Equipment	Electrical and Electronic Engineering Technologists and Technicians
		Engineering Technologists and Technicians
		Industrial Engineering Technologists and Technicians

Medical Equipment Repairers  
Mechanical Engineering Technologists and Technicians  
Mechanical Drafters  
Chemical Technicians  
Electrical and Electronics Drafters  
Electro-Mechanical and Mechatronics Technologists  
and Technicians

Middle-Advanced Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Bachelor's degree or higher</b>	Auditing	Industrial Engineers
	Continuous Improvement Process	Buyers and Purchasing Agents
	Cost Reduction	Mechanical Engineers
	Electrical Engineering	Architectural and Engineering Managers
	Electrical Systems	Engineers, All Other
	Human Machine Interfaces	Electrical Engineers
	Lean Manufacturing	Materials Engineers
	Manufacturing Engineering	Aerospace Engineers
	Manufacturing Processes	Electronics Engineers, Except Computer
	Mechanical Engineering	Marine Engineers and Naval Architects
	New Product Development	Chemical Engineers
	Process Improvement	Health and Safety Engineers
	Programmable Logic Controllers	
	PTC Creo (CAD Suite)	
	Root Cause Analysis	
	SAP Applications	



## Transportation, Warehousing, and Wholesale Trade

Some of the high-demand related skills for entry-level occupations for the transportation, warehousing, and wholesale trade sector are specialized and certificate skills, such as CDL class A and B licenses, Occupational Safety and Health Administration (OSHA), and vehicle maintenance. These skills may be aligned with some of the following occupations, such as first-line supervisors of transportation and material moving workers, farm equipment mechanics and service technicians, and automotive body and related repairers. Some of the high-demand related skills for middle-skilled occupations are specialized and certificate skills, such as axles, heavy equipment, and hoisting. These skills may be aligned with some of the following occupations, such as heavy and tractor-trailer truck drivers; aircraft mechanics and service technicians; and electrical and electronics installers and repairers, transportation equipment. Some of the high-demand related skills for mid-advanced skilled occupations are specialized and certificate skills, such as continuous improvement process, logistics, and procurement. These skills may be aligned with some of the following occupations, such as logisticians purchasing managers and supply chain managers. To see the full list of specialized skills and certificate skills and occupations, see Table 14 below.

**Table 14. Transportation, Warehousing, and Wholesale Trade**

Entry-Level Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>High school diploma/GED; some college, no degree</b>	CDL Class A License	Light Truck Drivers
	CDL Class B License	Heavy and Tractor-Trailer Truck Drivers
	Electrical Systems	First-Line Supervisors of Transportation and Material Moving Workers
	General Mathematics	Bus and Truck Mechanics and Diesel Engine Specialists
	Invoicing	Farm Equipment Mechanics and Service Technicians
	Material Handling	Mobile Heavy Equipment Mechanics, Except Engines
	Material Handling Equipment	Couriers and Messengers
	Occupational Safety and Health Administration (OSHA)	Automotive Body and Related Repairers
	Pallet Jacks	

Pre-Trip and Post-Trip  
Vehicle Inspections  
Vehicle Maintenance

Entry-Middle Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Associate's degree; postsecondary, nondegree award</b>	Axles	Automotive Service Technicians and Mechanics
	Heavy Equipment	Aircraft Mechanics and Service Technicians
	Hoisting	Motorcycle Mechanics
	Test Equipment	Electrical and Electronics Installers and Repairers, Transportation Equipment
Middle-Advanced Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Bachelor's degree or higher</b>	Continuous Improvement Process	Logisticians
	Cycle Counting	Purchasing Managers
	Logistics	Supply Chain Managers
	Material Flow Management	
	Procurement	
	Production Planning	
	Root Cause Analysis	
	Supplier Performance Management	

### Information and Digital Technology Occupational Cluster

Some of the high-demand related skills for entry-level occupations for the information and digital technology occupational cluster are specialized and certificate skills, such as data management, document processing, and expediting orders. These skills may be aligned with occupations like data entry keyers and computer user support specialists. Some of the high-demand related skills for middle-skilled occupations are specialized and certificate skills, such as active directory, application development, and systems analysis. These skills may be aligned with occupations like computer network support specialists. Some of the high-demand related skills

for mid-advanced skilled occupations are specialized and certificate skills, such as agile methodology, Amazon web services, and software engineering. These skills may be aligned with some of the following occupations, such as project management specialists, market research analysts and marketing specialists, and data scientists. To see the full list of specialized skills and certificate skills and occupations, see the Table 15 below.

**Table 15. Digital Technology**

Entry-Level Required Educational Attainment	Specialized & Certificate Skills	Occupations
High school diploma/GED; some college, no degree	Data Entry	Data Entry Keyers
	Data Management	Computer User Support Specialists
	Data Transmissions	
	Document Processing	
	Error Messages	
	Expediting Orders	
	Information Assurance Technician (IAT) Level I Certification	
Entry-Middle Required Educational Attainment	Specialized & Certificate Skills	Occupations
Associate's degree; postsecondary, nondegree award	Active Directory	Computer Network Support Specialists
	Application Development	
	Auditing	
	Backup Devices	
	Computer Hardware	
	Debugging	
	Desktop Support	
	Help Desk Support	
	Linux	
	Microsoft Azure	
	Microsoft Windows 10	
	Systems Analysis	
	Workflow Management	

Middle-Advanced Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Bachelor's degree or higher</b>	Agile Methodology Amazon Web Services Application Programming Interface (API) Automation Data Analysis Java (Programming Language) JavaScript (Programming Language) Microsoft Azure Python (Programming Language) SAP Applications Scrum (Software Development) Software Development Software Engineering SQL (Programming Language)	Project Management Specialists Market Research Analysts and Marketi Specialists Computer Systems Analysts Information Security Analysts Computer Network Architects Database Administrators Database Architects Network and Computer Systems Administrators Computer Programmers Software Developers Software Quality Assurance Analysts a Testers Web Developers Web and Digital Interface Designers Data Scientists

### Management and Business Administration Occupational Cluster

Some of the high-demand related skills for entry-level occupations for the management and business administration occupational cluster are specialized and certificate skills, such as balancing (ledger/billing), inventory control, and retail operations. These skills may be aligned with some of the following occupations, such as bookkeeping, accounting, and auditing clerks; shipping, receiving, and inventory clerks; and data entry keyers. Some of the high-demand related skills for middle-skilled occupations are specialized and certificate skills, such as accounts payable and receivable, bookkeeping, and workflow management. These skills may be aligned with some of the following occupations, such as health technologists and technicians; human resources assistants, except payroll and timekeeping; and bookkeeping, accounting, and auditing clerks. Some of the high-demand related skills for mid-advanced skilled occupations are specialized and certificate skills, such as change management, key performance indicators (KPIs), and supply management. These skills may be aligned with some of the following occupations, such as general and operations managers, project management

specialists, and facilities managers. To see the full list of specialized skills and certificate skills and occupations, see Table 16 below.

**Table 16. Management and Business Administration**

Entry-Level Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>High school diploma/GED; some college, no degree</b>	Balancing (Ledger/Billing)	Bookkeeping, Accounting, and Auditing Clerks
	Cash Handling	
	Inventory Control	First-Line Supervisors of Office and Administrative Support Workers
	Merchandising	
	Point of Sale	Shipping, Receiving, and Inventory Clerks
	Profit and Loss (P&L) Management	Payroll and Timekeeping Clerks
	Restaurant Management	Data Entry Keyers
	Restaurant Operation	Procurement Clerks
	Retail Operations	
Entry-Middle Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Associate's degree; postsecondary, nondegree award</b>	Accounts Payable	Human Resources Assistants, Except Payroll and Timekeeping
	Accounts Receivable	
	Billing	Bookkeeping, Accounting, and Auditing Clerks
	Bookkeeping	
	Expense Reports	
	Workflow Management	
Middle-Advanced Required Educational Attainment	Specialized & Certificate Skills	Occupations
<b>Bachelor's degree or higher</b>	Change Management	General and Operations Managers
	Continuous Improvement Process	Business Operations Specialists
	Key Performance Indicators (KPIs)	Human Resources Specialists
	Performance Management	Financial Managers
	Process Improvement	Accountants
	Purchasing	Project Management Specialists

SAP Applications

Supply Chain

Supply Management

Management Analysts

Industrial Production Managers

Operations Research Analysts

Human Resources Managers

Facilities Managers

Meeting, Convention, and Event  
Planners

Entertainment and Recreation  
Managers

Training and Development Managers

## VI. Conclusion

The primary and underlying question driving the Thrive Quad Cities analysis aimed to understand how higher education can be responsive to the region's education, training, and economic needs. The overall analysis conducted to answer this question looked to identify gaps and opportunities for local pathway development and skill training aligned to industry demand. It also aimed to consider ways to improve access to higher education for underserved and low-income populations and how partnerships across different sectors could lead to more interconnected systems and economic opportunities for Quad Cities residents and businesses.

Based on the collection of findings, the path forward for the Quad Cities is one of collaboration and innovation, requiring the collective efforts of K–12 education systems, postsecondary institutions, employers, and community organizations. By implementing the recommendations provided in the report, the Quad Cities and IBHE leaders can not only address its current challenges but to also guide educational and economic pathways to success in years ahead. To summarize, these recommendations include the following:

- Launching initiatives to create cohesive career awareness in K–12 that align with the economic needs of the region, engaging students and families in career exploration activities, and promoting industry partnerships.
- Expanding K–12 pipelines to address gaps and support student success, with a focus on increasing matriculation and readiness for postsecondary education, particularly in high-demand fields.
- Growing teacher development opportunities to ease the path to dual credit and English Language Learner (ELL) certification.
- Expanding “2+2” programs to provide more seamless transitions from community colleges to universities.
- Increasing work-based learning (WBL) and apprenticeship opportunities to bridge the gaps between education and employment by providing hands-on experience and fostering skill acquisition.
- Increasing meaningful connections among employers and educational institutions to strengthen and support student success, while also expanding training opportunities in high demand fields.
- Involving community-based organizations to bolster wraparound services that can support workforce participation.

- Expanding funding and for training programs to address the disparity between available jobs and postsecondary offerings, ensuring programs are responsive to high-demand, high-wage career paths.

By drawing on the commitment and existing work of the region's public officials, educators, and leaders in workforce and industry, the actionable steps in this report can forge a route forward for a thriving Quad Cities economy.



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## Appendix A: Methodology

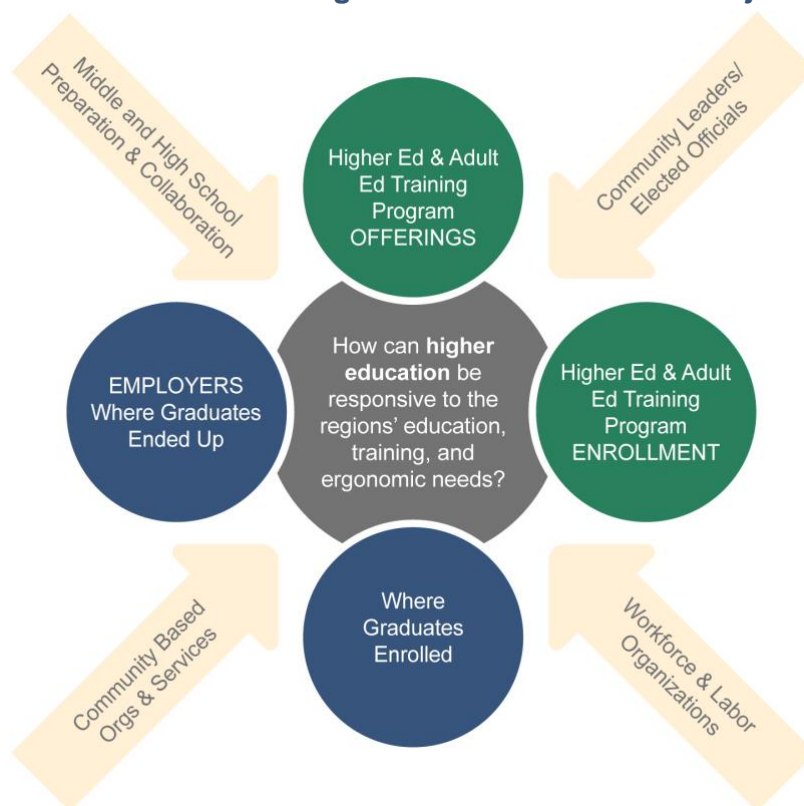
The Thrive Quad Cities project was designed to highlight a set of findings and recommendations to support regional education and workforce efforts in the Quad Cities region of Illinois. The education and economic analysis conducted looked at identifying gaps and opportunities for local pathway development and skill training aligned to industry demand. The analysis also considered ways to improve access to higher education for underserved and low-income populations and how partnerships across different sectors—education, the workforce, and community organizations—could lead to more interconnected systems and economic opportunities for both residents and businesses in the region.

Appendix A describes the project's purpose, key research questions, methodology, and main data collection and analyses. The methods and approaches for the project were also designed to be replicated in other regions across the state to maximize the positive effects of postsecondary education and training. For more information on replication, see the Thrive Quad Cities Replication Toolkit.

### Purpose and Key Research Questions

While the project aimed to connect local education and workforce systems, a central guiding question anchored the work—***How can higher education be responsive to the region's education, training, and economic needs?*** Processes and key considerations adopted to answer the question included hearing from key interest groups in the region about their experiences and exploring education and workforce data and opportunities. Figure A1 below illustrates the project's guiding question and the processes and key considerations driving data analysis and outreach in the region.

**Figure A1: Key Considerations Driving the Thrive Quad Cities Project**



To further answer the question, a series of additional research questions were identified. These questions are categorized in the table below:

**Table A1. Additional Research Questions**

<b>Collaboration Among Education Segments and Industry</b>	<ul style="list-style-type: none"> <li>• How does the K-12 education system/segment in Quad Cities collaborate across other education segments (intersegmental collaboration) for academic/career success and access?</li> <li>• In what ways does higher education collaborate with regional industry/employers to understand the workforce landscape and inform pathways and career opportunities/access?</li> <li>• How do industry employers and workforce agencies partner with education segments/systems (K-12, CCs, Universities, Adult Ed)? How do they partner with each other (e.g., other workforce orgs, employers, committees, Workforce Boards/consortia, etc.)?</li> </ul>
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<b>Education and Career Pathway Development and Workforce Alignment</b>	<ul style="list-style-type: none"> <li>• How do the higher education systems in the region prepare and provide education and career pathways support and opportunities?</li> <li>• Are higher education pathways in the region aligned to (and do they supply) the regional labor marketplace?</li> <li>• What are the education and training models that work well or that could be replicated (e.g., within the Quad Cities, elsewhere)?</li> </ul>
<b>Economic and Workforce Context, Needs, and Strategies</b>	<ul style="list-style-type: none"> <li>• What are the top five sectors in the region?</li> <li>• What are the high-demand, entry-level and middle skills jobs in the region?</li> <li>• What are the top skills employers are looking for (e.g., by degree/certification attainment, by job level, by industry/sector)?</li> <li>• What are the regional workforce and employers' key needs in the Quad Cities, particularly related to top industries and those with growth potential?</li> </ul>

## Design, Data Sources, and Analyses

WestEd's analysis for the Thrive Quad Cities project integrated mixed methodologies for a comprehensive study design. Beginning in September of 2023 and concluding in June of 2024, project activities leveraged engagement with key interest groups and both qualitative and quantitative data collection and analyses of economic, education, and workforce system data and resources. Table A2 lists the main data methods, types, and analyses that were a part of project activities.

**Table A2. Overarching Methods, Key Activities/Analyses, and Data Collected/Analyzed**

<b>Overarching Method</b>	<b>Key Activities and Analyses</b>	<b>Data Collected/Analyzed</b>
<b>Engagement with Key Interest Groups</b>	<ul style="list-style-type: none"> <li>• Scan, outreach, and interviews with key interest</li> </ul>	<ul style="list-style-type: none"> <li>• Perspectives on the education and workforce challenges, successes, and</li> </ul>

Overarching Method	Key Activities and Analyses	Data Collected/Analyzed
<b>(Qualitative)</b>	<p>groups in the region</p> <ul style="list-style-type: none"> <li>• Formation of a Thrive Quad Cities Advisory Committee</li> <li>• Facilitation of four roundtable discussions</li> <li>• Development of three surveys (employer, faculty, student)</li> </ul>	<p>needs in the Quad Cities</p> <ul style="list-style-type: none"> <li>• Contextual information and experiences from key interest holders</li> <li>• Feedback on project findings and strategies for recommendations</li> </ul>
<b>Education and Economic Landscape Analysis (Quantitative)</b>	<ul style="list-style-type: none"> <li>• Regional Economic Analysis</li> <li>• Occupational Cluster Analyses</li> <li>• Mapping K-12 and Higher Education pathways using a proportional analysis (Mapping)</li> <li>• Postsecondary Gap Analysis between educational supply and regional industry demand</li> <li>• Equity Analysis of completions and degrees awarded by race and ethnicity</li> </ul>	<ul style="list-style-type: none"> <li>• Regional Economic Analysis: Review of gross regional product, industry sector trends, employment concentrations, and occupation trends.</li> <li>• Occupational Cluster Analyses: Occupational data</li> <li>• Mapping: Connections among K-12 Career Technical Education, community college and university degrees or certificates awarded, and Quad Cities labor market</li> <li>• CTE concentrator data</li> <li>• Education supply data</li> <li>• Completions, degree, and demographic data</li> </ul>

The design and data collection described above produced complementary analyses that were threaded together through various feedback mechanisms throughout the project, (e.g., cross-checked for validation with key interest groups and data triangulation). The sections that follow offer more detail about the project's engagement efforts and the education and economic landscape analysis.

## Engagement with Key Interest Groups

The WestEd team collaborated with the Illinois Board of Higher Education (IBHE) to conduct a set of engagement activities focused on outreach to key interest groups, key interest holder interviews, the creation of an advisory committee, roundtable discussions, and survey development. These activities took a phased methodology to scaffold discussion and discovery, and to promote relationship building (see the *Thrive Quad Cities Replication Toolkit* for more detail on the project's engagement approach).

- **Key Interest Group/Holder Scan, Outreach, and Interviews** - The WestEd team completed a scan of key cross-sector/cross-segment groups in the region and conducted outreach to identify individuals for key interest holder interviews. The purpose of the interviews was to speak to at least one representative from each of the following targeted segments-local officials, higher education, K-12, industry, workforce, and community-based organizations. Eighteen interviews were conducted in total.
- **Advisory Committee** - From the initial conversations, champions and representatives were identified from the key interest groups to request participation in an advisory committee. Eleven members set up the purpose and charge of the group. These members represented different perspectives coming from two industry/workforce entities, one local industry employer, three higher-education institutions, one K-12 school district, and several government officials. Their roles helped to identify education and workforce needs and opportunities in the Quad Cities, support outreach and engagement, review and provide feedback on project findings from discussions and data analysis, and inform recommendations.
- **Roundtable Discussions/Focus Groups** - Employing wider outreach, additional recruitment and four roundtable discussions were held, including two industry roundtables (one focused exclusively on manufacturing), and one education and one community-based organization convening. A total of 16 individuals with leadership roles participated in the industry roundtables, with those attending from industry representing 13 different companies. The education roundtable included 13 individuals from different education segments and institutions. Nine individuals from eight community-based organizations participated in the last roundtable. The roundtables helped to establish cogent understanding of local contexts and bring additional perspectives to the fore of project efforts.

In addition, the WestEd team developed three online surveys to further elicit information from local industry employers, faculty, and students, and responses were received from 27 employers. Their contributions, plus those of the 13 different company representatives who participated in the roundtables, and the one industry member in the Advisory Committee, are



representative of a voluntary sample of 41 people with regional industry experiences and perspectives.

To analyze the qualitative data collected, the WestEd team reviewed notes from one-on-one and group engagement activities and coded input thematically. The team looked for salient themes that appeared across groups for regional challenges and gaps, opportunities, and strategies to carry forward. The findings, outlined in Section III of the full Thrive Quad Cities report, also helped to contextualize the quantitative data reported in the economic and education analyses.

## **Education and Economic Landscape Analysis**

The education and economic analysis portion of the Thrive Quad Cities project was conducted to shed light on the local education and workforce landscape through a review of labor market trends, occupational demand, K-12 and postsecondary education, and training pathways leading to employment. To establish understanding around education and economic supply and demand, the team engaged in the following main activities:

- **Regional economic analysis** - The regional economic demand analysis reviewed gross regional product, industry sector trends, employment concentrations, past and future projections of occupation trends, and skills demand in the Quad Cities. Five evidence-based metrics were chosen to determine the regional demand for labor: average annual job openings, average annual hires, five-years past occupational growth, five-years projected occupational growth, and employment concentration (i.e., location quotient.).
- **Occupational cluster analyses** - WestEd conducted analysis of occupational demand by cross-referencing occupational data with the highest producing industry sectors (measured by gross regional product) in the area. This method was chosen to better contextualize and frame employment needs since occupational clusters can relate to multiple industry sectors. Thus, the analysis included three industry sectors (manufacturing; health care; and transportation, warehousing, and wholesale trades) and two occupational groups that cut across all industries (information technology and digital technology, and management and business administration).
- **Mapping K-12 and Higher Education pathways** - The WestEd team used a proportional analysis to conduct a mapping of K-12 and Higher Education pathways. The analysis explored connections among K-12 Career Technical Education (CTE), community college and university degrees or certificates awarded, and the Quad Cities labor market. Data on matriculation and postsecondary readiness were also reviewed. The analysis in totality examined data leading to findings on CTE concentrators in the Quad Cities, postsecondary awards across 11 institutions, and regional employment by cluster. The mapping helped to



demonstrate intersegmental alignment that may contribute to postsecondary workforce misalignments.

- **Postsecondary workforce analysis** - A postsecondary gap analysis was conducted to identify where education was under supplying regional needs for talent. Within this analysis supply was measured as the average annual completions following the Classification of Instructional Programs (CIP) codes from postsecondary institutions in the Quad Cities. Data were collected from the Illinois Community College Board (ICCB) and IBHE for Black Hawk College and Western Illinois University Quad Cities campus. For the remaining postsecondary institutions in the Quad Cities, completions data were sourced from the Integrated Postsecondary Education Data System (IPEDS). Data for academic years 2019/20 through 2021/22 were collected and the average across those three years was calculated.
- **Equity analysis** - WestEd analyzed completions and degrees awarded by race and ethnicity at five core Quad Cities institutions and by the project's top five "industry" focus areas. The analysis intended to identify gaps or under-representation in completion patterns by the target criteria. Because the analysis also looked to identify cases of under-representation, it included additional groups beyond the criteria set (e.g., gaps uncovered for non-resident aliens) when important equity findings emerged.
- **Skills gap assessment** - A skills and gaps assessment was conducted to understand the specialized skills that align with high-demand occupations in the top five industry sectors and clusters in the region. Skills tables can be used by faculty to verify that curricular content aligns with the top specialized skills needed for high-demand occupations. These findings are included in the Skills Demand section of the report, highlighting specialized and software skills in demand across the top five sectors and clusters, and the Skills Gap Assessment section of the report, a look at high demand specialized skills by fields of study.

Multiple data sources and analytical approaches were used for the education and economic landscape activities. For example, economic and labor market data pulled from Lightcast and educational data came from the IBHE, publicly available data produced by the states of Illinois or Iowa, data pulled from the National Student Clearinghouse, US Census data, and other sources. Comparisons of educational completions and workforce demand were organized by instructional program (CIP) codes and compared to regional occupational demand using the federal CIP/SOC crosswalk that aligns instructional program codes to occupational codes used by the Bureau of Labor Statistics. For the equity analysis, the WestEd team analyzed completion patterns by gender and by race and ethnicity for the five occupational clusters in the workforce supply and demand analysis. Because the methods used for the economic demand

and education pathway analysis are integral to the findings, discussion on methods is provided within Section IV of the Thrive Quad Cities report and for each of the main activities.

It is important to note that the study design incorporated methodological choices and that alternative methods may exist. For example, the postsecondary workforce gap analysis looked at institutions as a primary supplier for skilled workers. However, there are additional ways that employers fill roles such as through recruiting workers from outside a region. Such data points, like worker trends from migration flows would require additional analysis (see Section IV in the report on considerations for the postsecondary workforce analysis for more information).

## **Limitations and Validity**

The Thrive Quad Cities project was meant to establish an understanding of the education and economic landscape in the region to target capacity building efforts and to inform a regional plan. The project's design and methodology were aligned to that intent and tailored to analyze local context, perspectives, and data. While the regional scope provides a snapshot of the education and economic landscape in one area of Illinois, it limits the ability to generalize findings to other contexts or populations. Findings, however, can be useful for local education, industry, and community interest groups hoping to strengthen or develop new training and career opportunities.

The methodology used for the Quad Cities project triangulated quantitative data with qualitative interviews and content analysis of regional economic and workforce development documents. As such, it looked to cross-verify information and sources for both validation and deeper understanding.<sup>1</sup> Processes to assess qualitative data during the project included triangulating information to look for "convergence" and inviting project participants to provide feedback or confirmation<sup>2</sup> on themes researchers coded and analyzed. Triangulation also included reconciling qualitative and quantitative data for "compatibility,"<sup>3</sup> comparing information across trusted data systems, and considering statistical differences occurring from data timeliness (e.g., such as accuracy of longitudinal data and frequency of data updates).

The main threat to validity during the project was from non-response bias or small sample size following survey administration. The project team hoped to learn about employer needs across

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<sup>1</sup> Better Evaluation. "Triangulation." Accessed June 26, 2024. <https://www.betterevaluation.org/methods-approaches/methods/triangulation>.

<sup>2</sup> Creswell, John W. Research Design: Qualitative & Quantitative Approaches. Thousand Oaks, CA: Sage Publications, Inc., 1994.

<sup>3</sup> Patton, Michael Quinn. Qualitative Research and Evaluation Methods. 3rd ed. Thousand Oaks, CA: Sage Publications, Inc., 2022.

a large swath of industry sectors and thus cast a wide net with the industry survey, receiving 27 employer responses. Multiple advisory committee members assisted with outreach efforts and several reminder emails were sent to invited participants. While acknowledging the limitations due to a small sample size, the responses received were triangulated with information from the roundtables, advisory committee meetings, and the education and economic data.

For quantitative metrics used in the analysis, data quality and accuracy were key considerations. Labor market projections are susceptible to error in the event of any non-linear dynamics including recessionary periods, natural disasters, or significant changes in investment. Reporting in the underlying BLS surveys or for educational institutions can affect the quality of data. The mixed methods approach used in this project allowed for additional vetting of data, though due to the amount of data utilized in the analysis it isn't exhaustive. Some sources of data reflect national data sets for example, educational attainment by occupation, which could vary significantly at local or regional levels. Modeling methods used follow industry best practices, though many alternative methods exist and can yield different results, each with different benefits and limitations. Professional discretion was used in cases where adjusting methodology would best reflect the workforce and educational realities of the Quad Cities.

## Appendix B: Quad Cities Workforce Overview and Training Providers

### Public Workforce System

The public workforce system in both Illinois and Iowa falls under the umbrella of the Workforce Innovation and Opportunity Act (WIOA). The funding for WIOA programs originates in the U.S. Department of Labor, Employment and Training Administration and is then allocated by formula to each state. Illinois received \$146,830,068 and Iowa received \$12,857,132 in the current program year (ending on June 30, 2024) to administer Youth, Adult, and Dislocated Worker programming. While the difference in funding is significant, it is important to note that Cook County/City of Chicago received a very large portion, nearly 35%, of the Illinois funding, due to the large percentage of population it represents in Illinois.

The programs that are supported through WIOA funds address both employer and job seeker needs. Services are offered through a network of career one-stop centers known as American Job Centers. The state of Illinois has 23 local workforce areas (LWIA), and Iowa has six, and each LWIA has at least one American Job Center (AJC). In the Quad Cities, there are four AJCs: two in Illinois (Rock Island and Kewanee) and two in Iowa (Davenport and West Burlington).

The services offered in each center include but are not limited to what is included in the list below. Links to services offered at each Quad Cities center are included.

- **Employer/Business Services**

- [Illinois Business Services](#)

- [Iowa Employer Services](#)

- Recruitment assistance and recruitment events
    - Screening and referral of candidates
    - Provision of incumbent worker training funds
    - Labor market information customization, analysis, and distribution
    - Labor exchange services (job matching)
    - Human resource consultation services (job descriptions, employee policies, onboarding/orientation assistance, job accommodation assistance, employment law explanation, etc.)
    - Industry sector strategies and partnerships
    - Apprenticeship programs

- **Job Seeker Services**

- [Rock Island, IL Job Seeker Services](#)

[Davenport, IA Job Seeker Services](#)[West Burlington, IA Job Seeker Services](#)

- Basic career services
  - Job search assistance
  - Labor market information
  - Employability skills workshops
- Individualized career services
  - Career planning
  - Comprehensive and specialized assessments
  - Development of an Individual Employment Plan (IEP)
  - Case management
- Training Services

Each local workforce area within a state can determine the service mix and strategy that is most appropriate for their local economy. Workforce program strategies must be laid out in local and/or regional WIOA Plans. Links to the Local and Regional WIOA (LWIA) plans for the Quad Cities region are below.

## **WIOA Plans**

- [Illinois – LWIA 13 and Northwest Economic Development Region](#)
- [Iowa – Mississippi Valley Workforce Area](#)

## **Public Workforce System Training Funds (Individual Training Accounts)**

The funding for training services through WIOA is spent through eligible training providers in each state. Funds are referred to as Individual Training Accounts (ITAs) and are awarded to job seeking customers to obtain occupational skill training. The training programs that are funded are those that have been identified as being important to the employment base and economy in the state and/or local area. Often local community colleges apply to be the eligible training provider for training programs that may receive WIOA funding. In order for a training program to be reimbursed for services under WIOA, the educational entity must apply to be included on the State's Eligible Training Provider List (ETPL). Obtaining status on an ETPL varies from state to state and is often a time-intensive process, but once on the ETPL, a training provider can provide occupational training to job seekers and be reimbursed through WIOA ITAs. The current post-secondary programs on the ETPLs are included at the end of this document.

- **Illinois Eligible Training Provider List**
  - [Illinois Workforce Development System](#) – Eligible Training Provider List (ETPL)
  - [Instructions on becoming a WIOA Eligible Training Provider in Illinois](#)
- **Iowa Eligible Training Provider List**
  - [Iowa Workforce Development](#) – Eligible Training Provider List (ETPL)
  - [ETPL Training Provider User Guide](#)

## Employer WIOA Funding Opportunities

- **WIOA Incumbent Worker Training Funds**  
Incumbent Worker training is designed to meet the needs of an employer or group of employers to retain a skilled workforce or avert layoffs. Incumbent Worker training can be used to either help avert potential layoffs of employees or obtain the skills necessary to retain employment, such as increasing the skill levels of employees so they can be promoted within the company and create backfill opportunities for new or less-skilled employees.

Opportunity	Type/Focus Area	Description	URL
Mississippi River Valley Workforce Investment Board	Job training, workforce development, business grants for employee training	Provides funds for training, tuition assistance, work-based learning, job search and employment assistance for job seekers. Funding for employers to upgrade the skills of current employees (Retrain and Retain grant).	<a href="https://www.mississippivalleyworkforce.org/">https://www.mississippivalleyworkforce.org/</a>
American Job Center – Rock Island	Job training, workforce development, business grants for employee training	Provides funds for training, tuition assistance, work-based learning, job search and employment assistance for job seekers. Funding for employers to upgrade the skills of current employees (Incumbent Worker Training Program).	<a href="https://theamericanjobcenter.org/">https://theamericanjobcenter.org/</a>

- **On-the-Job Training (OJT)**

On-the-Job Training (OJT) provides reimbursements to employers to help compensate for the costs associated with skills upgrade training for newly hired employees and the lost production of current employees providing the training (including management staff). OJT training can assist employers who are looking to expand their businesses and who need additional staff trained with specialized skills. OJT employers may receive up to 50 percent reimbursement of the wage rate (in certain circumstances up to 75 percent) of OJT trainees to help defray personnel training costs.

- **Work Experience (Youth and Adult)**

A work experience or internship is a planned, structured learning experience that takes place in a workplace for a limited period of time. Work experiences or internships may be paid or unpaid, as appropriate, and consistent with other laws, such as the Fair Labor Standards Act. A work experience or internship may be arranged within the private for-profit sector, the nonprofit sector, or the public sector. For youth, work experiences may also include: pre-apprenticeship programs, summer employment and other employment activities available throughout the school year, internships and job shadowing, and on-the-job training.

- **Transitional Jobs**

Transitional jobs are a type of work experience local workforce areas may provide under WIOA. Transitional jobs are time-limited and wage-paid work experiences that can be subsidized up to 100 percent. These jobs are in the public, private, or nonprofit sectors.

## WIOA Target Industries in the Quad Cities

Organization	Target Industries	Integrators/ Companies Mentioned	Links
American Job Center - Rock Island <a href="https://theamericanjobcenter.org/index.php">https://theamericanjobcenter.org/index.php</a>	High Impact Industry Sectors <ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Healthcare</li> <li>• Professional and Business Services</li> <li>• Construction</li> </ul>	Partners: Project Now, Illinois Department of Employment Security, Black Hawk College – Adult Education, Illinois Department of Human Services – Vocational Rehabilitation and Temporary Assistance for	<a href="https://theamericanjobcenter.org/businesses.php">https://theamericanjobcenter.org/businesses.php</a> Incumbent worker training Work-Based Learning/Apprenticeships On-the-Job Training

Organization	Target Industries	Integrators/ Companies Mentioned	Links
	<ul style="list-style-type: none"> <li>Information Technology</li> </ul>	Needy Families, National Asian Pacific Center on Aging, United Migrant Opportunity Services, The Arc of the Quad Cities	
Mississippi Valley Workforce Investment Board <a href="https://www.mississippivalleyworkforce.org/">https://www.mississippivalleyworkforce.org/</a>	Targeted Industry Sectors <ul style="list-style-type: none"> <li>Advanced Manufacturing</li> <li>Healthcare</li> <li>Information Technology</li> <li>Transportation &amp; Logistics</li> </ul>	Manufacturing Board member companies listed in link. U.S. DOL Job Quality Academy grant recipient Iowa Workforce Development – U.S. Defense Department SkillBridge Program <a href="https://workforce.iowa.gov/skillbridge">https://workforce.iowa.gov/skillbridge</a>	Advanced Manufacturing Sector Board <a href="https://www.mississippivalleyworkforce.org/advanced-manufacturing">https://www.mississippivalleyworkforce.org/advanced-manufacturing</a> Other sectors are under development

## Apprenticeship Training

### Quad Cities High Schools Registered Apprenticeship Program

High School Registered Apprenticeship programs combine work-based on-the-job learning with relevant technical education in the classroom. Students who participate in these programs graduate with a high school diploma, college credits, and national industry credentials.

Students typically begin their on-the-job learning in the summer between 11th and 12th grade by working eight hours a day at a work site. During their senior year, they'll spend four hours a day working on-site at a business while attending a half-day of school. After graduation, students continue in their apprenticeship until all related training hours and standards are met.

In the Quad Cities region, many of the school districts offer a variety of apprenticeship programs. Some recent apprenticeship opportunities include:



- Welder
- CNC Machining
- IT Software Engineering (ITSE)
- IT Electronic Systems Technology (ITEST)
- Certified Nurse Assistant (CNA)
- Bank Teller
- Electrician (pre-apprenticeship)
- Automotive Technology
- Auto Body / Repairer
- Auto Service Technician
- Airframe Mechanic
- Diesel Tech
- Farm Worker General
- Farming General
- Baker

Note: This is not a comprehensive list. Programs are added regularly, so it is important to check with local school districts for the most up-to-date information.

### **Illinois State Board of Education Work-Based Learning**

The Illinois State Board of Education (IBSE) has developed a [work-based learning database](#) to help facilitate relationships between school districts and businesses and expand work-based learning (WBL) throughout the state. Employers complete a survey form indicating the type of WBL experience available (apprenticeship, internship, job shadowing, employment, etc.) and the school district where they are located, and information is populated into a searchable website. Right now, this website will recognize [Illinois Employer Champions](#) who are working with local school districts on work-based learning opportunities, but it is intended to be expanded to allow for connections between school districts and employers.

This program is part of a larger work-based learning initiative being conducted by the [Illinois State Board of Education's Career and Technical Education division](#).

### **Iowa Statewide Intermediary Work-Based Learning Grant Program**

One area that was often cited during the engagement with interest groups in this project was the need for intermediaries to implement and manage work-based learning (WBL) activities. In Iowa, \$1.5 million was awarded for [Statewide Intermediary Work-based Learning Grants](#) to help Iowa high school students experience one-on-one contact with potential employers and help them make informed decisions about postsecondary education and careers. The funding is to

encourage the creation and development of a range of WBL programs including internships, job shadowing experiences, apprenticeable occupations, or other workplace learning opportunities in targeted industries. Grants were awarded in 2023.<sup>4</sup>

### **Building and Construction Trade Union Apprenticeship Programs available through the Tri-City Building and Construction Trades Council**

The Tri-City Building and Construction Trades Council is an association consisting of the affiliated union crafts that represent skilled construction trades members who are involved in all aspects of building and construction in the Western Illinois and Eastern Iowa region.

- [Boilermakers Training Center](#)
- [Bricklayers and Allied Craftworkers – Local Union #6](#)
- [Carpenters JATC – Local Union #4](#)
- [Cement Masons Local Union #18](#)
- [Electricians JATC – Quad Cities Electrical Training Center](#)
- [Glaziers JATC](#)
- [Heat and Frost Insulators and Asbestos Workers Local 81](#)
- [Ironworkers Local Union #111](#)
- [Laborers Local Union #309](#)
- [Millwrights & Technical Engineers Local Union #2159](#)
- [Operating Engineers JATC – Local Union #150](#)
- [Operative Plasterers and Cement Masons Local Union #18](#)
- [Painters JATC](#)
- [Plumbers and Pipefitters JATC](#)
- [Roofers Local Union #32](#)
- [Sheet Metal Workers Local Union #91](#)
- [Sprinkler Fitters Local Union #669](#)
- [Teamsters Local #371](#)

### **U.S. DOL Registered Apprenticeships in the Quad Cities**

- **Community Registered Apprenticeships**
  - Eastern Iowa Community College
    - Advanced Manufacturing/Maintenance: Electricians, Industrial Machinery Mechanics, Machinists, Patternmakers, Machine Tool Setters/Operators/Tenders, Tool and Die Makers, Welders
    - Automotive Service Technicians and Mechanics

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<sup>4</sup> <https://workforce.iowa.gov/media/1197/download?inline=>

- Culinary: Cooks
- **CBO/Government Registered Apprenticeships**
  - Rock Island Arsenal
  - Machinists
  - ICI East Moline Correctional Center
  - Administrative Services Managers

## **Eligible Training Provider List – Post Secondary Training**

This section provides a list of post-secondary training programs that fall within the purview of eligible training providers under the Workforce Innovation and Opportunity Act (WIOA) for both the Quad Cities' Illinois and Iowa sides. The list was derived from the Illinois WorkNet Center and Iowa Works. Hyperlinks are provided to access both sources.

### **Illinois WorkNet WIOA Approved training Programs**

#### **Black Hawk College**

- Accounting Specialist
- Administrative Assisting
- Assistant Teacher Certificate
- Basic Nurse Assistant Training Program (BHC Cert. Code 5566)
- Computer Information Technology – IT Support Technician
- Computer Information Technology – Network Administration
- Criminal Justice Technology AAS
- Early Childhood Education AAS
- Early Childhood Educator Certificate
- Emergency Medical Technician – Paramedic Certificate
- Health Information Management (HIM)
- Medical Assisting Certificate
- Nursing Associate Degree
- Patient Care Assistant
- Physical Therapist Assistant AAS
- Practical Nurse
- Surgical Technology
- Visual Communications AAS
- Welding Certificate Program

**Eastern Iowa Community College District**

- Accounting Management AAS
- Administrative & Office Support
- Associate of Applied Science in Nursing
- Automotive Technology Associates
- Criminal Justice AAS
- Diagnostic Cardiac Sonography
- Diagnostic Medical Sonography
- Diesel Technology AAS
- Early Childhood Education
- Elementary Education
- General Maintenance Welding Certificate
- Health Information Management
- HVAC
- Information Technology
- Medical Assistant
- Practical Nursing
- Radiology Technology AAS
- Supply Chain and Logistics
- Welding – Associates of Applied Science
- Welding – Diploma

**MedCerts**

- Allied Healthcare Professional
- Clinical Medical Specialist
- Cloud Specialist
- IT Helpdesk Administrator
- IT Network Technician
- IT Security Specialist
- Medical Assistant
- Medical Assistant Registered Apprenticeship Program
- Medical Billing Specialist
- Medical Coding and Billing
- Medical Coder/Biller Registered Apprenticeship
- Medical Front Office Assistant & Admin. Specialist
- Medical Front Office and Electronic Health Records

- Microsoft Office Specialist
- Patient Care Technician
- Pharmacy Technician Professional
- Pharmacy Technician Registered Apprenticeship Program
- Phlebotomy Technician
- Phlebotomy Technician Apprenticeship Program
- Professional Coder
- Physical Therapy Aide and Administration Specialist

**Midwest Technical Institute**

- Basic Nursing Assistant
- CDL Training Course (25 Days)
- Dental Assisting
- HVAC/R-MAR Technician
- Medical Assisting Program
- Welding and Pipefitting

**St. Ambrose University**

- BSN

**Scott Community College**

- Certified Nurse Aide

**Trinity College of Nursing and Health Sciences**

- Bachelor of Science in Nursing
- Medical Laboratory Sciences

**Western Illinois University**

- Bachelor of Business – Accountancy
- Bachelor of Business – Human Resource Management
- Bachelor of Business – Supply Chain Management
- Bachelor of Science in Elementary Education
- Bachelor of Science Information Systems
- Bachelor of Science – Engineering

## Iowa—Iowa Works ETPL Approved Programs

### **Eastern Iowa Community Colleges**

- Accounting Management – Diploma
- Accounting Management AAS
- Administrative Office Professional
- Adobe Certified Professional in Visual Design (Continuing Education)
- Adobe Certified Professional in Web Design (Continuing Education)
- Agribusiness Management
- American Sign Language – English Interpreting
- Automotive Technology
- Business Professional
- Certificate in Project Management (Continuing Education)
- Certified Information Systems Security Professional (Continuing Education)
- Certified Legal Secretary (Continuing Education)
- Certified Medical Administrative Assistant (CMAA) (Continuing Education)
- Certified Nurse Aide (75 hr Nurse Aide Instruction) (Continuing Education)
- Certified Paralegal (Continuing Education)
- Certified Virtual Assistant (Continuing Education)
- Child Development Associate (CDA) Program (Continuing Education)
- CMAA with Medical Billing and Coding (Continuing Education)
- CNC Machining
- Commercial Driver's License (CDL) – Automatic Transmission (Continuing Education)
- Commercial Driver's License (CDL) – Manual Transmission (Continuing Education)
- CompTIA A+ Certification Training (Continuing Education)
- CompTIA Certification Training: Network+, Security+ (Continuing Education)
- Dental Assisting
- Diesel Technology
- Early Childhood Education
- Emergency Medical Technician (EMT) (Continuing Education)
- Engineering Technology
- Engineering Technology, Certificate
- Environmental Health and Safety
- Event Management and Design (Continuing Education)
- Health Information Management
- Heating, Ventilation, and Air Conditioning
- Human Resources Professional (Continuing Education)

- Industrial Maintenance/Industrial Mechanic, Diploma
- Information Technology Programming
- Iowa Substitute Teacher Authorization (Continuing Education)
- Mechanical Design Technology
- Medical Assistant
- Medical Billing and Coding (Continuing Education)
- Medication Aide (Continuing Education)
- NASM Certified Personal Trainer (Continuing Education)
- Nursing
- Paramedic (Continuing Education)
- Pharmacy Technician (Continuing Education)
- Phlebotomy Technician (Continuing Education)
- Practical Nursing
- Professional Bookkeeping with QB Online + Payroll Practice/Management (Continuing Education)
- Professional Bookkeeping with QuickBooks (Continuing Education)
- RA Program: Cook
- RA Program: Machinist
- RA Program: Mold Maker
- RA Program: Pattern Maker
- RA Program: Tool and Die
- RA Program: Welder
- Radiology Technician
- Ready for Work Production Welding (Continuing Education)
- Renewable Energy Systems Specialist
- Social Work
- Sonography/Advanced Diagnostic Imaging
- Supply Chain and Logistics
- Surgical Technology
- Technical Studies
- Veterinary Technician
- Welding

### **Goodwill of the Heartland**

- Certified Custodial Technician
- Certified Guest Service Professional

- Customer Service and Sales
- Front Desk Representative
- Google Cybersecurity Professional
- Google Digital Marketing & E Commerce Professional
- Google IT Support Professional
- Guest Room Attendant
- Hospitality Food Service Careers
- Hospitality Maintenance Technician
- ServSafe Food Protection Manager
- Social Media Marketing Professional

**Midwest Technical Institute**

- Dental Assisting
- HVAC
- Medical Assisting
- Medical Coding Specialist
- Welding
- Welding and Pipefitting

**Orion Technical College**

- Electronics Engineering Technology
- Health Information Management Associate of Science Degree
- Massage Therapy
- Medical Assisting Technology
- Medical Billing and Coding
- Medical Massage Therapy

**Southeastern Community College**

- RA Program: Ironworker
- Accounting AAS
- Accounting Certificate
- Accounting Diploma – Accounting Clerk
- Advanced Automation and Robotics Technology
- Advanced Manufacturing Welding Processes Certificate
- Advanced Welding Processes Certificate
- Agriculture, Modern Food Production & the Environment Diploma



- Agriculture, Modern Food Production and the Environment AAS
- Automotive Technology
- Automotive Technology – Automotive Mechanics Diploma
- Basic Industrial Maintenance Technology (BIMT) Mechanical Endorsement
- Basic Welding Process Certificate
- Building Construction Certificate
- Business Administration: Office Management
- Business Office Professional Certificate
- CDL Class B
- Child Development – Preschool Certificate
- Child Development Infant/Toddler
- Class A CDL Driver's License
- CNA
- Collision Repair and Restoration AAS
- Computer Aided Design Technology AAS
- Construction Technology – Building Construction Diploma
- Construction Technology – Carpentry Emphasis AAS
- Construction Technology – Management Option AAS
- Criminal Justice Transfer Major
- Early Childhood Education AAS
- Early Childhood Education Diploma
- Electrical Maintenance Technician Certificate
- Elementary Education Transfer Major
- Emergency Medical Services AAS
- Entrepreneurship AAS
- Entrepreneurship Certificate
- Entrepreneurship Diploma
- Forklift Operator Certificate
- Hospitality Certificate
- Industrial Maintenance Technology AAS
- Industrial Plant Maintenance Technology Diploma
- IT Technician Diploma
- Legal Office Professional Certificate
- Mechanical Maintenance Technician Certificate
- Medical Assistant
- Medical Billing and Coding
- Modern Food Production Certificate

- Office Professional Diploma
- Office Technology Certificate
- Paraeducator Certificate
- Paramedic
- Parent Educator Certificate
- Phlebotomy Certificate
- Practical Nursing
- Precision Machining and CNC Technology AAS
- Production Welding Certificate
- Registered Nurse
- Respiratory Care
- Secondary Education Transfer Major
- Small Business Management Certificate
- Welding AAS
- Welding Diploma

### **Trinity College of Nursing and Health Sciences**

- Medical Laboratory Sciences BS
- Nursing BS
- Radiography AAS

### **Upper Iowa University**

- Accounting BS
- Business Administration BS
- Criminal Justice BS
- Financial Management
- Health Services Administration
- Human Resources Management BS
- Human Services BS
- Information Technology BS
- Management BS
- Master of Business Administration
- Psychology AA
- Psychology BS
- Public Administration

## Appendix C: Funding Resources for Quad Cities Students, Programs, and Workforce Development

Sustainability is one of the three strategic goals for a thriving Illinois. Equitably fostering educational pathways that are financially stable for students and education institutions is fundamental to that aim. While the state offers a strong, state-funded and needs-based program for low-income students, the Monetary Award Program (MAP), need for additional funding exists to help bolster individual student-level and institutional support, and to keep up with the ever-growing costs of tuition, fees, and programming.<sup>5</sup>

This appendix provides a scan of key federal, state, and local Quad Cities funding resources available to students and institutions. It can be used as a reference list to identify potential funding opportunities and investments. When possible, the information in the list includes funding for historically marginalized and underserved populations.

### Funding for Students, Institutions, and Workforce

There is a multitude of resources available to both students and institutions in the Quad Cities to support educational and workforce training and program needs. Illinois' **Monetary Award Program (MAP)** is available to students demonstrating financial need based on FAFSA information and attendance at approved Illinois colleges—such as Augustana College, Black Hawk College, and the University of Western Illinois.<sup>6</sup> While MAP grants do not need to be repaid, they have allocation measures in place, such as limiting funding to fall and spring terms and a suspension date.<sup>7</sup>

Beyond MAP, there are numerous state scholarships and grants available to students. For example, the **Illinois Student Assistance Commission (ISAC)** provides a listing of state and federal financial aid programs, scholarships, work-study programs, grants, and loans.<sup>8</sup> Examples of some of the opportunities on ISAC's list include the following:

- **Aspirational Institutional Match Helping Illinois Grow Higher Education (AIM HIGH) Grant Program.** Equitable access to higher education is a priority across Illinois. AIM HIGH provides

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<sup>5</sup> For more information see the Illinois Board of Higher Education's 2021 strategic plan: A Thriving Illinois [https://ibhestrategicplan.ibhe.org/pdf/A\\_Thriving\\_Illinois\\_06-15-21.pdf](https://ibhestrategicplan.ibhe.org/pdf/A_Thriving_Illinois_06-15-21.pdf)

<sup>6</sup> <https://www.isac.org/students/during-college/types-of-financial-aid/grants/monetary-award-program/>

<sup>7</sup> *Ibid*

<sup>8</sup> See the listing at <https://www.isac.org/students/during-college/types-of-financial-aid/illinois-and-federal-financial-aid-programs.html>

assistance to eligible Illinois residents toward full-time undergraduate cost of attendance at one of Illinois' 12 public, four-year institutions.

- **Minority Teachers of Illinois (MTI) Scholarship Program.** Key interest groups who engaged with the Thrive Quad Cities project noted a need to foster opportunities for regional teachers. The MTI scholarship program awards \$7,500 per year to qualified and eligible African American/ Black, Hispanic American, Asian American, or Native American applicants planning to teach at eligible schools.
- **Illinois Special Education Teacher Tuition Waiver (SETTW) Program.** The SETTW program is a tuition waiver program for teachers or students pursuing careers in special education. The program includes Illinois' 12 public, four-year institutions, of which Western Illinois University has a campus in Quad Cities.
- **Nursing Education Scholarships (NES).** The Quad Cities also has a need for medical workers in the region. The Nursing Education Scholarships provide funding to pursue eligible certificates and degrees in nursing to applicants demonstrating financial need.

In addition to listing funding and scholarship opportunities, organizations like ISAC and community colleges in the area provide on-site support and workshops to help students with other financial needs, such as with building understanding of and access to financial aid. Local institutional scholarships and funding in the Quad Cities also help to defray the cost of college attendance.

The resources listed above provide local and state funding examples that help students access affordable education and potential career training. Funding is also available to help develop and sustain education and career training programs and for workforce development. Table C1 provides a selected list of major federal, state, and funding resources that may be useful for regional education and workforce interest groups.

**Table C1. Federal, State, and Local Quad Cities Funding Resources**

Source	Description
<b>Federal Sources</b>	
<a href="#"><u>Economic Development Administration (EDA)</u></a>	The Economic Development Administration is a bureau of the U.S. Department of Commerce. Resources and listings include funding for local technical assistance programs and economic assistance and programs. The EDA offers the Rural Jobs and Innovation Accelerator grant and urban revitalization programs.
<a href="#"><u>Employment and Training Administration (ETA)</u></a>	Funding opportunities listed with the Employment and Training Administration, part of the U.S. Department of Labor, include access to grants, dislocated worker opportunities, and funding for training and employment programs. ETA grants include the H1-B Skills Training Grant, the Strengthening Community Colleges Training Grant (SCCTG) Program, and WIOA programs.
<a href="#"><u>U.S. Department of Commerce (DOC)</u></a>	Funding and opportunities listed with the U.S. Department of Commerce include grants for small businesses, economic development, advanced manufacturing, and more. For example, the NIST Office of Advanced Manufacturing, which falls within the DOC, provides financial assistance information, programs, and outreach for advanced manufacturing.
<a href="#"><u>U.S. Department of Education (ED)</u></a>	The U.S. Department of Education offers discretionary grants, student loans and grants, and formula grants. Examples of U.S. Department of Education resources include Federal Pell Grants, Supplemental Education Opportunity Grants (FSEOG), the Education and Training Voucher (ETV), National Health Services Corps, federal student loans, and work-study opportunities.
<a href="#"><u>U.S. Department of Labor (DOL)</u></a>	Opportunities listed on the U.S. Department of Labor include competitive labor grants, programs, and funding for training. Examples include the Apprenticeship Building America Grant Program, the Critical Sectors Job Quality Grants Program, the National Farmworker Jobs Training Grant, and Pathway Home Grant.
<b>State Sources</b>	

Source	Description
<a href="#">BioConnect Iowa</a>	BioConnect Iowa is an outreach program that helps entrepreneurs apply to the federal Small Business Administration's Small Business Innovation Research and Technology Transfer program.
<a href="#">Illinois Grants</a>	Illinois Grants is an active catalog of state financial assistance programs. It supplies information on active programs and awards.
<a href="#">Illinois Department of Commerce and Community Affairs</a>	The Illinois Department of Commerce and Community Affairs is a hub for programs and services, with listings to grants and funding opportunities across community and business development, employment and training, and more.
<a href="#">Illinois Student Assistance Commission</a>	The Illinois Student Assistance Commission (ISAC) provides a listing of state and federal financial aid programs, scholarships, work-study programs, grants, and loans.
<a href="#">Iowa Grants</a>	Iowa Grants is a portal to state grants and funding opportunities.
<a href="#">Iowa Workforce Development</a>	Iowa Workforce Development offers programs, initiatives, and grants such as registered apprenticeships and scholarships. This includes the Accelerated Career Education Program (260G).
<a href="#">Targeted Small Business Program, Iowa</a>	Iowa's Targeted Small Business Program offers small business support and programming for women, those with minority status, and individuals with disabilities.
<b>Quad Cities Sources</b>	
<a href="#">American Job Center (Rock Island)</a>	The American Job Center (Rock Island) is a local One-Stop resource center providing residents with opportunities to education and training scholarships, career services, and support.
<a href="#">Mississippi Valley Workforce Investment Board</a>	The Mississippi Valley Workforce Investment Board oversees workforce services to employers, jobs seekers, and businesses. It also provides information on grant programs and policy, such as WIOA incumbent worker training.
<a href="#">Moline Regional Community Foundation</a>	The Moline Regional Community Foundation offers philanthropic support, community funding, and grants.
<a href="#">Quad Cities Chambers</a>	Dedicated to growing regional businesses and economy, the Quad

Source	Description
	Cities Chambers provides information and resources to foster talent and employer pipelines, such as with work-based learning opportunities.
<a href="#">Quad Cities Community Foundation</a>	With a mission to “transform the region through the generosity of donors,” the Quad Cities Community Foundation provides charitable gifts to address regional needs.
<a href="#">Regional Development Authority</a>	The Regional Development Authority funds community initiatives and provides regional development grants.
<a href="#">Scott County Regional Development Authority</a>	The Scott County Regional Development Authority provides funding for area non-profits, education institutions, and government entities.

## Appendix D: Quad Cities Wraparound Supports, Community-Based Organizations, and Public Services

Wraparound supports and community-based services help to address the gaps and challenges that individuals face to accessing opportunities, both academically and personally. This appendix examines the wraparound supports that are available at the five Quad Cities higher education institutes featured in the main report, particularly aligning them to elements of academic and personal support. It then explores the benefits and value that regional community-based organizations and public services offer in the area.

The appendix provides a landscape scan and map of organizations, activities, and opportunities that might be leveraged to create further supports or to identify partnerships to help address regional barriers to education and career success.

### Quad Cities Higher Education Wraparound Supports – Academic and Personal

Within higher education, wraparound supports address a full range of services to support students' needs.<sup>9</sup> The importance and benefits of such a holistic model are that it seeks to address multiple barriers and needs that an individual may face. Wraparound support can also be tailored to various populations, such as first-generation students or students and families with low income to help provide equitable foundations with which to access, navigate, and balance higher education.<sup>10</sup>

As part of workforce development, wraparound services also help potential job seekers and current workers navigate career trajectories. Wraparound support from employers may include partnership with educational institutes to provide skills training for incumbent workers, investing in transit benefits and programs to help bridge commuting difficulties, or housing options to provide worker security. In fact, the Workforce Innovation and Opportunity Act (WIOA) incorporates wraparound services in its design by promoting stronger partnerships and alignment across workforce, education, vocational rehabilitation, and human services systems.<sup>11</sup>

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<sup>9</sup> The Hunt Institute (2022). Attainment for All: Postsecondary Pathways Creating Equity in Wraparound Student Services. <https://hunt-institute.org/wp-content/uploads/2022/04/final-A4A-brief-april-22.pdf>.

<sup>10</sup> *Ibid*

<sup>11</sup> U.S. Department of Education. WIOA: A Vision to Revitalize the Workforce System. (2015). <https://sites.ed.gov/osers/2015/05/wioa-a-vision-to-revitalize-the-workforce-system/>



A website review of the student services or student resources pages for each of the higher education institutions in the Quad Cities reveals readily available resources at each school—both for academic (e.g., advisors, tutoring services, mentoring) and personal support (e.g., mental health, housing, food, etc.). Table D1 provides an overview of findings from that review.

**Table D1. Five Quad Cities Higher Education Institutions’ Academic and Personal Supports**

Academic Supports		Personal Supports	
<u>Augustana College</u>			
<b>Advising:</b> First-Year Advisor, First-Year Advising group, Major Advisor  <b>Learning Commons:</b> Advising, Academic Coaching, Disability Services, English as a Second Language, Reading/Writing Center, Tutoring		<b>Counseling:</b> Crises Support, Emergency Reporting, Student Counseling Services, Mental Health Screening, Peer Support, Psychiatric Care, Resources for Underrepresented Communities, Self-Care, TimelyCare  <b>Food Resources:</b> Campus Cupboard, Campus Kitchen  <b>Health Care:</b> Clinical Services	
<u>Black Hawk College</u>			
<b>Advising:</b> Advising Events, Educational Advisors, Career and Technical Advisors, Specialty Advisors, Transfer Advisors  <b>Perkins Program:</b> Program supports services such as academic advising and academic skill workshops, tutoring, etc.  <b>Multicultural Entrepreneurial Center:</b> Provides academic and career support for underrepresented students, first-generation students, and aspiring business entrepreneurs. MEC coordinator serves as an advisor and liaison.  <b>Testing Center:</b> Provides testing location and support  <b>TRIO Student Support Services:</b> Program		<b>Career Services:</b> Career Exploration, Career Prep and Readiness, Career Services Center, Free Employment Assistance  <b>Counseling:</b> Counselor Access, Food Pantries, Peer Mentors, Suicide Prevention, Student Clubs/Organizations, TimelyCare Telehealth (24/7 medical, 24/7 mental health, scheduled counseling, psychiatry, free wellness classes)  <b>Disability Resources:</b> Accommodations (assistive technology, books in alternate format, equipment loan, note-takers, sign language interpreters, testing, Online Resources/Access)  <b>Multicultural Entrepreneurial Center:</b> Multicultural Mentoring Program, Explore the World Presentations, Entrepreneurship	

Academic Supports	Personal Supports
<p>supports services such as academic advising, access to equipment, career development assistance, tutoring, workshops</p> <p><b>Tutoring:</b> In-person walk-in hours, Virtual Walk-in hours</p>	<p>Workshop</p> <p><b>Safety:</b> Safety and Campus Police</p> <p><b>Student Life and Clubs:</b> Student Clubs, Student Government Association</p> <p><b>Veterans/Military Student Support:</b> Educational Benefits (Veteran), Veterans Resource Center</p>
Eastern Iowa Community College	
<p><b>Academic Groups:</b> SCC Honors Program, Pathways for Academic Career and Employment (PACE) program, RISE Scholar, TRIO</p> <p><b>Advising:</b> Academic Advisor, Access to Course Catalog, Guidance on Reading Class Schedules, Transfer Planning</p> <p>Canvas: Virtual Campus</p> <p><b>Financial Aid Services:</b> Online Resources about Financial Aid Opportunities (Scholarships, Grants/Work Study, Loans)</p> <p><b>Libraries:</b> Art Space (Galleries), Library Resources (anatomical resources, books, electronic resources), Personal Appointments with Librarians (30 min sessions), Study Space</p> <p><b>Registration and Records:</b> Support through Academic Advisor, Guidance for processes (Graduation, transcript/records requests, evaluations, etc.).</p> <p><b>Testing Centers:</b> Four free testing centers for EICC students, Fee-based proctoring for non-EICC students</p> <p><b>Tutoring (Varies by Campus):</b> General Tutoring, Math Tutoring, Online Resources, RISE program, Writing Consultations/Resources</p>	<p><b>Campus Resources:</b> Bookstore, Business Office, Child Care, Computer Labs, Counseling and Mental Health, Food Pantries, Libraries, Online Resources about Community Resources and Debt Forgiveness, Parking, Registration and Records, Safety and Security</p> <p><b>Career Services:</b> Business and Industry Online Space, Career and Program Explorer, Career Services Coordinator (provides support with career exploration, resume, interview prep), Employment Podcasts, Industry Videos, Handshake, Iowa Career Pathway Maps, Job Simulation, One-on-One Assistance, Online Access (to career services), Online Assessments</p> <p><b>Disability Services:</b> Accommodations (for concurrent and college students), Educational accommodations, Housing accommodations, Service/Emotional support animals permitted</p> <p><b>Student Life and Clubs:</b> Athletics, Multiple clubs/organizations dependent on campus, Pathways for Academic Career and Employment (PACE) program, Social Media, Student Activities</p> <p><b>Veterans/Military Student Support:</b> Education Benefits and Assistance, EICC Student</p>

Academic Supports	Personal Supports
	Veterans Group, Home Base CHAMP partner, Online Veteran Profile to Share Stories,
<b>St. Ambrose College</b> (additional information at this link for <a href="#">student life at Ambrose</a> )	
<p><b>Academic Advising:</b> Academic Advisory (assigned summer before beginning classes), New Student Seminar, Department/Major Advisor</p> <p><b>Academic and Career Planning:</b> Advisor support (building schedule, classes, career coaching, choosing a major), Mock interviews/interview prep, Resources provided on the school portal, Resume/Cover Letters/LinkedIn support, YouScience Assessment</p> <p><b>Library:</b> Kanopy Video Streaming Service, Equipment Loan, Study Rooms</p> <p><b>Student Success Center:</b> Peer Tutoring, Study Skills and Time Management, Supplemental Instruction, Tutoring (in-person), Writing Tutorials</p>	<p><b>Accessibility Resource Center:</b> accommodations, Academic Course Selection Advising, Advocacy, Alternative Exam arrangements, Assistive Technology, Assistive Listening Devices, Books in Alternative Format, Course Substitution, Disability Service Provider, Non-Academic Accommodations, Note Takers, Read/Write Software, Referral for Disability Diagnosis, Sign Language Interpreters, Workforce Recruitment Program</p> <p><b>Counseling Center:</b> Ask.Listen.Refer Online Program, Consultation for faculty and staff, In-person/virtual counseling appointments, Mobile Crisis Unit, Psycho-educational programming, Referrals (medial, psychiatric, psychological), Substance Abuse Screening/Referral, Suicidal Crises, Virtual Calming Hive,</p> <p><b>Career Oriented:</b> Academic and Career Planning supports, Career Fairs and Events (The Quad Cities College Career Fair and Health Sciences Career and Networking Fair), Handshake</p> <p><b>Student Life:</b> Academic and Career Planning, Campus Ministry, Clubs and Organizations (Academic/Professional, Cultural, Honor Societies, Service, Special Interest), Residential (Housing, On-Campus living), Student Diversity/Equity/Inclusion (Councils, Initiatives, Events), Wellness and Recreation Center</p> <p><b>Veteran Services:</b> Benefits Assistance, Veterans Recruitment and Services Office</p>

Academic Supports	Personal Supports
<b>Western Illinois University – Quad Cities</b>	
<p><b>Academic Advising and Support Center:</b> Academic Advisor/Advisement (by program, for guidance with majors, courses, schedules, processes, career guidance)</p> <p><b>Educational Resources:</b> Student Computer Lab, Tutoring Resources, US Bank Writing Center, WIU-QC Library, WIU-QC Testing Center, Study Abroad</p> <p><b>Finance Guidance and Financial Aid Services:</b> Financial Aid Office, Scholarships, Student Employment</p> <p><b>Honors Program:</b> Honor College</p>	<p><b>Career Center:</b> Career Fairs/Workshops, Career Prep and Employer Engagement, Cover Letter Assistance, Handshake, Resume reviews/writing guidance</p> <p><b>Disability Resources:</b> Accommodations, Alternative Testing, Alternative Materials Format, Accessible Classrooms, Assistance with Accessible Classrooms/Residence Halls, Assistance with Notes, FM Assistive Listening Equipment, Sign Language Interpreters</p> <p><b>Health, Wellness/Safety:</b> Counseling (University Counseling Center, Online resources provided for local area access), Emergency Alert System, Fitness Center, Mental Health Resources, Rock Island County Health Department</p> <p><b>QC Cultural Alliance:</b> Promotion of Inclusive and Diverse campus, cultural awareness/appreciation, respect</p> <p><b>Student Life and Clubs/Organizations:</b> Casa Latina Cultural Center, Food Pantry, Gwendolyn Brooks Cultural Center, Housing (Off Campus Living), LGBT*QA Resource Center, Military Appreciation Club, Office of Student Activities, SALUTE Veterans National Honor Society, SITREP, Women's Center, WAVE</p> <p><b>Veterans/Military Student Support:</b> Educational Benefits, Veterans Admissions, Veterans Resource Center</p>

## Quad Cities Community Organizations and Public Services

Community organizations and public services are vital for developing regional well-being, whether it be for economic, community, or education systems and their health. They serve as key partners, for example, that provide wraparound services both within and outside of educational institutions. They also work to advocate and help individuals overcome life barriers or transitions. The services provided range widely and include examples such as supporting transportation needs, offering options for housing security, supplying communities with food pantries, or supporting justice-involved individuals with reentry into society.

In workforce development, the importance of community-based organizations and public services cannot be overstated. These organizations often establish relationships and provide training or career opportunities to migrants, refugees, or vulnerable populations such as those without shelter or in crises. They also exist through the work of the American Job Centers (AJC), vocational rehabilitation programs, and various coordinating entities, all of which aim to provide outreach services, access to programming, and supports. Moreover, they provide local community members with a trusted foundation through which workforce systems can aim to support and build equitable access for all.

Discussion with regional community-based organizations (CBOs) highlighted the benefits that CBOs and public service agencies offer Quad Cities residents and the value they provide for local partnerships. For example, the Safer Foundation, United Way, Goodwill, and others in the area focus on providing wraparound support and job training. They also serve to connect education and industry partners to the populations they serve. For example, Family Resources provides services within K–12 and higher-education. They offer prevention education for K–12 and support Title IX coordinators at colleges. The Arc of Quad Cities also works with schools to educate students and families about available resources for populations with disabilities. Table D2 below provides detail on how regional CBOs participating in the Quad Cities CBO Roundtable mapped some of their services with intersections of K–12 and higher education partners, families, and the workforce and industries.

**Table D2. Quad Cities CBOs: Working at the Intersection of Education, Families, and Workforce**

**Family Resources:** Provides prevention education to K–12; supports Title IX Coordinators at colleges; offers 24/7 crises services to survivors of domestic and sexual violence, homicide, and trafficking; offers ongoing support and counseling.

**Goodwill of the Heartland:** Offers job training and specific industry-based training to youth and adults; provides wraparound services to participants (sometimes includes families); works with

people with disabilities (often includes families); provides occupational skills training in partnership with workforce and industry; helps students identify career interests; teaches digital skills at 3 Helms Career Centers in the Quad Cities.

**Junior Achievement:** Provides K–12 programming focused on career readiness, financial literacy, and entrepreneurship; JA curriculum aligns with state standards; programs are led by community volunteers (often from the business community).

**Project NOW:** Project NOW works with families with low income.

**Safer Foundation:** Facilitates reentry into the community from involvement with legal system and help moving forward with education (youth and adults, 16+); families or guardians are typically involved with the Youth Empowerment Program; all programs have an end game of preparing for/placing individuals in quality employment (youth, prerelease, or back into community).

**The Arc of the Quad Cities Area:** Works with schools to educate graduating students and their families on resources available to adults with disabilities; works closely with employers to determine their needs and customize jobs that might be suitable for individuals with disabilities.

**The United Way:** Works with schools to address challenges and coordinate community resources (United for Schools); United Way’s Education Council (includes superintendents, Higher Ed, Early Childhood, and business representation).

**United Migrant Opportunity Services (UMOS):** Works with High School seniors who have worked in agriculture or whose parents have worked in agriculture (for tuition assistance and money for training); works with teachers and other partners in high schools to promote the program.

Source: CBO responses at the Quad Cities CBO Roundtable

Reviewing the landscape around community-based organizations in the region and with those participating as champions within the Advisory Committee, truly highlights model efforts within the Quad Cities. However, key interest groups also noted a need for additional services. Services mentioned were those that help get people to work and then stay in work, such as with access to childcare and transportation.

Table D3 provides a list of community-based organizations and public service resources in the Quad Cities. The following listing does not include all available resources but provides access and information on key CBOS and services that can help harness the benefits of wrap-around support. It can also serve as an information tool for stakeholders across the education,



workforce, and community systems to further outreach efforts in ways that draw connections to support and address the needs of targeted populations.

**Table D3: Quad Cities Community Based Organizations and Public Services/Resources**

Organization/ Resource	Description	Support Provided	Programs/ Initiatives	Listed Partnerships
<a href="#"><u>Community Action of Eastern Iowa (CAEIO)</u></a>	The CAEIO is a community action center that provides assistance for children, families, and individuals in Eastern Iowa. <a href="https://www.caeiowa.org/about-us/">https://www.caeiowa.org/about-us/</a>	Childcare and supplies, Utility Assistance	Childcare program development, Diapers, Finding childcare, Home energy conservation, Utility bill assistance	
<a href="#"><u>Dress for Success Quad Cities</u></a>	Dress for Success Quad Cities is a non-profit that empowers women to achieve financial independence by providing a network of support, professional attire, and the development tools to help women thrive in work and life. <a href="https://www.dressforsuccessqc.org/about-us/">https://www.dressforsuccessqc.org/about-us/</a>	Career coaching, Career and professional development workshops, Professional clothing	Career Coaching, Fill-a-Bag Friday, HireHER, StyleHER, Professional Women's Group	Illinois and Iowa

Organization/ Resource	Description	Support Provided	Programs/ Initiatives	Listed Partnerships
<a href="#"><u>Family Resources</u></a>	The Family Resources' mission is to support successful lives to build strong communities. <a href="https://www.famres.org/about/"><u>https://www.famres.org/about/</u></a>	Aftercare, Care, Crises/Residential, Donation services, Health, Foster/Adoption, Mental Health, Survivor	Coordinated Assessment Program	Multiple partners and a member of multiple networks and associations
<a href="#"><u>Goodwill of the Heartland</u></a>	Goodwill of the Heartland empowers people with services to find employment, career training/advice, career information, and to build skills and independence. <a href="https://www.goodwillheartland.org/about-us/"><u>https://www.goodwillheartland.org/about-us/</u></a>	Business Solutions, Community Living Support, Day Habilitation, Employment Training, Job Placement and Maintenance Services, Veterans Services	Helms Career Centers, United Way Education Council, United for Schools, Virtual Career Center	
<a href="#"><u>Junior Achievement of the Heartland (JA)</u></a>	The JA gives young people the knowledge and skills they need to own their economic success, plan for their futures, and make smart academic and economic choices. <a href="https://heartland.ja.org/about/"><u>https://heartland.ja.org/about/</u></a>	Entrepreneurship, Lessons in financial literacy, Work and career readiness	Curriculum programs	Multiple, business community support



Organization/ Resource	Description	Support Provided	Programs/ Initiatives	Listed Partnerships
<a href="#">Narratives QC</a>	Narratives Quad Cities focuses on empowering young adults (17–25) to find purpose and life path and offers connections to trained life coaches. <a href="https://www.narrativesqc.org/who">https://www.narrativesqc.org/who</a>	Life coaching, Mentors	Coaching, Group classes	
<a href="#">Project NOW</a>	Project Now provides services to eliminate the causes of poverty through strategic initiatives that help people meet basic needs and achieve self-sufficiency. <a href="https://www.projectnow.org/about.php">https://www.projectnow.org/about.php</a>	Childcare, Clothing, Education, Housing, Household goods, Transportation, clothing, Utilities	Clothing, Eviction diversion, Head Start, Homeless services, Household items, Housing, Property rentals, Rural public transit, Scholarships, Senior Services, Weatherization, Utility assistance	Continuum of Care organizations
<a href="#">Project Renewal</a>	Project Renewal aims to act as a stabilizing force for young people in the City of Davenport. <a href="https://www.projectrenewal.net/about.html">https://www.projectrenewal.net/about.html</a>	Educational, Recreational, Social activities (for children during the school year and summer)	Fit-Fest	Multiple local partners and support

Organization/ Resource	Description	Support Provided	Programs/ Initiatives	Listed Partnerships
<a href="#"><u>Quad Cities Community Foundation</u></a>	Works with charitable donations/partners to grow community opportunities. <a href="https://www.qccommunityfoundation.org/what-we-do"><u>https://www.qccommunityfoundation.org/what-we-do</u></a>	Grants/Scholarship opportunities (post-secondary and training funds for students), Quad Cities Impact Fund, Youth philanthropy	Teens for Tomorrow, Volunteer Committees	Affiliate foundations
<a href="#"><u>Quad Cities Open Network</u></a>	The Quad Cities Open Network of public service organizations works to increase community well-being through a strong human services sector.	Community resource database		Community Foundation, Moline Foundation, Regional Development Authority
<a href="#"><u>Safer Foundation</u></a> (Davenport branch)	The Safer Foundation provides employment, education, and advocacy supports for justice-involved individuals and their potential. <a href="https://saferfoundation.org/about-us/"><u>https://saferfoundation.org/about-us/</u></a>	Education and Training, Job Placement, Re-entry, Wellness	Youth and young adult programs, The Safer Demand Skills Collaborative (SDSC)	Correctional Education, Workforce development,
<a href="#"><u>SAL Family and Community Services</u></a>	SAL Community services supports, advocates, and provides learning in childcare.	Early care, Education resources	High quality childcare and education, Childcare resource and referral,	Childcare providers, Agencies

Organization/ Resource	Description	Support Provided	Programs/ Initiatives	Listed Partnerships
	<a href="https://www.salcommunityservices.org/about-us">https://www.salcommunityservices.org/about-us</a>		Stabilization services	
<a href="#"><u>Salvation Army</u></a>	The Salvation Army in Quad Cities is dedicated to providing assistance to communities and those in need in the region.	Food, Housing, Rental assistance, Utility assistance, Youth programs	Eviction Diversion Program, Food pantry, Housing (Homeless Assistance and Prevention, Rapid Rehousing Program, Shelter Program), Utility and Clothing Assistance	
<a href="#"><u>The Arc of the Quad Cities Area</u></a>	The ARC Quad Cities works to empower those with disabilities so as to meet their potential. <a href="https://arcqca.org/who-we-are/">https://arcqca.org/who-we-are/</a>	Community employment services, Residential, Work services, Assistive technology fund	Ticket to Work	Multiple
TMBC (Together Making a Better Community) at <a href="#"><u>The Lincoln Center</u></a>	The TMBC aims to empower and educate Quad City youth, families, and community through strong opportunities. <a href="https://www.thelincolncenterqc.org/about">https://www.thelincolncenterqc.org/about</a>	Community, family, youth, business resources	Born Learning Academy, Business Incubator Program, Meeting space/Library, We Reach We Teach (finding employment)	United Way, Davenport Police Dept.

Organization/ Resource	Description	Support Provided	Programs/ Initiatives	Listed Partnerships
			opportunities)	
<b>Township programs in Quad Cities</b>	Township programs in the Quad Cities come from multiple partners and provide assistance to township residents	General assistance	Clothing, blankets, Emergency Food and Shelter Funding, General Assistance, Student bus tickets, Utility assistance, Work Readiness – bus passes	
United Migrant Opportunity Services (UMOS) (Moline branch)	The UMOS provides programs and services to improve employment, educational, health, and housing opportunities of migrant and farm workers in several states. <a href="https://www.umos.org/about-us/about-umos/">https://www.umos.org/about-us/about-umos/</a>	Child development, Social services, Workforce development, Scholarships, Assistance and subsidies	Child Development (Migrant and Seasonal Head Start, Migrant Child Care); Social Services (Anti-Human Trafficking, Farmworker Housing, Food Pantry, Health Promotions, Latina Resource Center); Workforce Development (Adult Education, Farm and Food Workers Relief Program, National	Public and private organizations

Organization/ Resource	Description	Support Provided	Programs/ Initiatives	Listed Partnerships
			Farmworkers Jobs Programs, Unemployment Insurance Navigator Program)	
<a href="#">United Way Quad Cities</a>	<p>The core focus for the United Way is to foster an equitable, engaged, united, and empowered Quad Cities. The mission involves mobilizing people and resources for the community for every Quad Cities resident and for full potential.</p> <p><a href="https://unitedwayqc.org/about-us/">https://unitedwayqc.org/about-us/</a></p>	Academic, Community Impact Funds, Health, Income	Early education support and literacy, Food drive, Health, Wish lists for families	Yes, Multiple

## **Appendix E: Quad Cities Opportunity Maps Overview**

Opportunity maps are intended to share a picture of the regional sector-based career pathways with corresponding educational trajectories. The maps follow a path from entry-level occupations that require some college or a non-degree award within a sector to middle-skilled occupations that require an associate's degree, and finally advanced-level occupations requiring a bachelor's degree. Occupations are grouped by the associated skills and educational attainment required for the position with a wage range displayed that reflects the 10th percentile wages (as a proxy for entry-level wages) up to median wage for entry and middle-skilled occupations. Advanced-level occupations requiring a bachelor's degree contain a wage range from median to the 75th percentile to more accurately reflect the earning potential for bachelor's degrees.

As illustrated below, each Opportunity Map contains a listing of specialized skills on the left side that have been obtained through Lightcast Job Posting Analytics for the region. Above the image of the road are the categories of occupations with corresponding educational programming that prepares a learner for that occupation beneath the road. Where there is a substantial amount of certificate programs available for multiple entry-level occupations, such as with manufacturing, the entry-level occupations and corresponding educational programs are divided into two columns.



- Augustana College (AC)
- Black Hawk College (BHC)
- Eastern Iowa Community College (EICC)
- St. Ambrose University (SAU)
- Western Illinois University – Quad Cities Campus (WIU)

Programs of study are identified by institution using the key provided at the bottom of the Opportunity Map. Programs listed were identified through websites, college catalogues, and a program inventory for Black Hawk College and Western Illinois University.

The information in the Quad Cities Opportunity Maps mirrors much of the information contained in the skills tables provided at the end of the main project report. Together, the skills tables and opportunity maps may be used by faculty to verify that education and training contain the skills and latticed model required to build a talent pipeline that is productive at an entry-level position.



# Quad Cities Opportunity Map

## Advanced Manufacturing



### Specialized Skills:

Troubleshooting /  
Problem Solving  
Computer Literacy  
Mechanical Aptitude/  
Mathematics  
Machinery  
Blueprinting  
Safety Standards



Electrical/Electronic  
Production Tech.  
Manufacturing  
Production Tech  
Team Assembler  
Mechanical Drafter



Electrical/Electronic  
Production Tech.  
Manufacturing  
Production Tech  
Team Assembler  
Mechanical Drafter



Engineering Technician  
Mechanical Engineering  
Tech/Supervisor  
Electrical/Electronic  
Production Tech/Supervisor  
Manufacturing Production Tech  
CNC Operator/Programmer  
Industrial Machine Mechanic  
Electro-mechanical Technician  
Electrical Drafter  
Mechanical Drafter



Mechanical Engineering  
Technologists and Technicians  
Mechanical Engineer  
Electrical Engineer

Detail Oriented  
Communications  
Forklift Truck  
Inventory  
Automation & Controls  
Standard Operating  
Procedures (SOP)  
Reading Comprehension  
Principles of Lean/  
Continuous Improvement  
Processes  
Microsoft Office  
Microsoft Excel  
Maintenance & Repair

### Certificates:

Additive Manufacturing - E  
Advanced Welding - E  
AutoCAD - B  
Automation and Robotics - E  
CNC Machine Operator - E  
CNC Production - B  
CNC Programmer - E  
Digital Modeling and Additive  
Manufacturing - E  
Digital Modeling for  
Manufacturing - E  
Engineering Technology  
Fundamentals Certificate - B  
Engineering Technology - E

Engineering Technology - E  
Fundamental Welding - E  
Gas Metal Arc Welding - B  
Heating, Ventilation,  
and Air Conditioning - E  
Heating, Ventilation  
and Air Conditioning  
Industrial Maintenance/  
Industrial Mechanic - E  
Manufacturing Fundamentals - E  
Manufacturing Management - E  
Manufacturing Process - B  
Shielded Metal Arc Welding -- B  
Supply Chain and  
Logistics (Online) - E  
Welder/Welding - E, B



### Associate Degree

AAS Electrical  
Engineering Techs - B  
AAS Engineering  
Technology Electrical  
Track - B  
AAS Engineering  
Technology Manufacturing  
Track - B  
AAS Engineering Technology  
Mechanical Track - B  
AAS Technical Studies - E  
AST Pre-engineering - B; W



### Bachelor's Degrees

Civil Engineering - W  
Electrical Engineering - W  
Engineering - A; W; S  
Engineering Technology - W  
Industrial Engineering - S  
Mechanical Engineering - W; S



# Quad Cities Opportunity Map

## Digital Technology



### Specialized Skills:

Troubleshooting/ Problem Solving  
Computer Literacy  
Mechanical Aptitude/ Mathematics  
Machinery



Administrative Assistant  
Entry-level Data Scientist  
Web Developer



Help Desk Specialist  
Entry-level Data Scientist  
Entry-level Database Architect  
Network Support Specialist  
Administrative Assistant



Entry-level Database Architect \$18.85  
Software Developer \$31.85  
Computer User Support Specialist \$25.87  
Information Security Analysts \$41.12



Data Base Administrator  
Database Architects  
Computer Network Architects  
Computer Systems Analysts

Blueprinting  
Safety Standards  
Detail Oriented Communications  
Forklift Truck  
Inventory  
Automation & Controls  
Standard Operating Procedures (SOP)  
Reading Comprehension  
Principles of Lean/ Continuous Improvement Processes  
Microsoft Office  
Microsoft Excel  
Maintenance & Repair



### Credit Certificates

Augmented and Virtual Reality (AVR) - E  
A+ Prep Certificate - B  
Business Software Certificate - B  
Cybersecurity - E  
Data Analytics - E  
Graphic Arts Technology - E  
IT Support Technician Certificate - B  
Network + Prep Certificate - B  
Network Administrator Certificate - B  
Network for Cybersecurity - E  
Networking for Systems and Security - E  
Programming - E  
Web Development - E



### Associate Degrees

AAS Computer Information Technology - IT Support Technician - B  
AAS Computer Information Technology - Network Administration and Security Track - B  
AAS Computer Information Technology - Secure Software Development Track - B  
AAS Court Reporting Technology - B  
AAS Cybersecurity - B  
AAS Cybersecurity (Online) - E  
AAS Networking for Systems and Security - E  
AAS Graphic Arts Technology - E  
AAS Programming - E  
AAS Visual Communication - B  
AAS Web Development - E



### Bachelor's Degrees

BA in Mathematics and Computer Science - A  
BS in Information System - W  
Major Computer Network Administration - S  
Major Computer Science - S  
Major Cybersecurity - S  
Major Data Analytics - A  
Major Data Analytics-Business Analytics Track - A  
Major Data Analytics-Data Science Track - A  
Major Data Science and Analytics - S  
Minor Computer Network Administration - S  
Minor Computer Science - S

# Quad Cities Opportunity Map

## Healthcare



Specialized Skills:

- HIPPA
- CPR/BLS
- Medical and Lab Techs
- Cultural Competency
- Behavioral Health
- Vitals
- EPIC
- Digital Record Keeping
- EMR
- Writing and grammar
- Resilience and Coping Skills
- Problem Solving
- Customer Service
- MA skills
- Surgical Tech skills
- Communication (internal and external)
- Microsoft Office



**Certificates**  
Nursing Assistant

### Certificates

- Medication Manager - E
- Paramedic - E
- Practical Nursing Certificate - B; E
- Patient Care Assistant Certificate - B
- Phlebotomy -
- Pre-occupational therapy - A
- Pre-optometry - A
- Pre-Pharmacy- A; S
- Pre-physical therapy - A
- Pre-physician assistant - A
- Trauma-Informed Care - S



### Certificates

- Medical Assistant (MA) \$17.89
- Clinical Dental Assistant \$21.57
- Medical Billing & Coding Specialist \$21.68
- Medical Record Specialist \$19.31
- Pharmacy Technician \$20.24

### Certificates

- Basic Nurse Assistant Training Program - B
- Cancer Information Management - E
- Dental Assisting - E
- Emergency Medical Technician - E
- Emergency Medical Technician - Paramedic - B
- Emergency Medical Services - Paramedic - S
- Expanded Functions - E
- Health Care Academy - E
- Medical Assisting Certificate - B; E
- Medical Coding Specialist Certificate - B
- Medication Aide - E



### Associate Degrees

- Phlebotomy Technician
- Community Health Worker
- Nursing Assistant
- Emergency Medical Technician (EMT)



### Associate Degrees

- Medical Assistant (MA)
- Phlebotomy Technician
- Dental Assistant

### Associate Degrees

- AA/AAS Pre-Health Professional Pathway- E
- AAS Radiologic Technology - E
- AAS Respiratory Care - E
- AAS Surgical Technology - B; E
- AAS Veterinary Technician - E
- AA Exercise Science & Kinesiology Transfer Major - E
- Pre-Nursing - A
- Pre-Occupational Therapy - A
- Pre-Physical Therapy - A
- Pre-Physician Assistant - A
- Online Nursing - S

### Associate Degrees

- AAS Nursing - B
- AAS Associate in Applied Science EMS - Paramedic - B
- AAS Cancer Information Management - E
- AAS Dental Hygiene - E
- AAS Diagnostic Cardiac Sonography - E
- AAS Diagnostic Medical Sonography - E
- AAS Emergency Medical Services - E (Paramedics)
- AAS Health Information Management - B, E
- AAS Nursing - E
- AAS Pre-Chiropractic Pathway - E
- AAS Physical Therapist Assistant - B



**Bachelor's Degrees**  
Registered Nurse

### Bachelor's Degrees

- Communication Science and Disorders - A
- Cytotechnology- A
- Human Performance and Fitness - S
- Kinesiology - A
- Nursing - S
- Pre-dentistry - A
- Pre-Medical Technology - A
- Pre-Medicine/ Pre-Medical Studies - A
- Pre-Nursing - A
- Psychology - W, A
- Public Health - A, W
- Speech Language Pathology - A

# Quad Cities Opportunity Map

## Logistics and Transportation



Specialized Skills:

- Good Driving Record
- Detail Oriented
- Communications/ Customer Service
- Order Fulfillment
- Forklift
- Warehousing
- Safety
- Microsoft Office
- Excel
- Machinery
- CDL A & B
- Inventory Control
- Operations
- Literacy
- Math
- Team Work
- Continuous Improvement



\$18-29/hr.

Diesel Technician  
Automotive Service Technician  
Heavy Tractor-Trailer Truck Driver  
Industrial Truck & Tractor Operator



\$17-27/hr.

Warehouse Supervisor  
Supervisor Diesel Engine



\$30-60hr.

Logistician  
Purchasing Manager  
Supply-chain Manager  
Diesel Technologist Supervisor



Certificates:

- Automotive Repair - B
- Automotive Technology - E
- Automotive Technology Service - E
- Brake Specialist - B
- Diesel Technology - E
- Heavy Duty Equipment - E
- Supply Chain and Logistics - E
- Supply Chain Management - W
- Truck Driving - E
- Wheel Alignment/Suspension - B



Associate Degree

- Automotive Technology - E
- Diesel Technology - E
- AAS Automotive Repair Technology - B
- AAS Supply Chain and Logistics



Bachelor's Degree

- Supply Chain Management - S, W



# Quad Cities Opportunity Map

## Management / Business Administration



### Specialized Skills:

Accounting  
Auditing  
Invoicing  
Data Entry  
Project Management  
Billing  
Bookkeeping  
SAP Applications  
Supply Chain Management  
Key Performance Indicators (KPIs)  
Workflow Management  
Process Improvement  
Inventory Control  
Administrative Support  
Finance  
Performance Management  
Expense Reports  
Office Equipment/Office Supply Management  
Microsoft Office



Shipping, Receiving, and Inventory Clerk  
Payroll and Timekeeping Clerk  
Procurement Clerk  
Entry-level Accounting Manager  
Customer Service Manager  
Data Entry Keyer  
Accounting Clerks  
Entry-level Business Resource Specialist  
Human Resource Assistant



Accounting and Auditing Clerk  
Entry-level General Manager  
Entry-level Accounting Manager  
Farm/Ranch Manager  
Greenhouse Manager



Accountants  
Business Operations Specialist  
Project Management Specialist  
Entertainment and Recreation Manager  
Facilities Manager  
Industrial Production Manager  
Human Resource Specialist



### Certificates:

Accounting Clerk - B  
Accounting Management - E  
Agricultural Science - E  
Business Professional - E  
Construction Management - E  
Data Analytics Certificate - E  
Financial Services - E  
Frontline Management (Micro-credential) - E  
Hotel and Restaurant Management - E  
Human Resource Management - S  
Manufacturing Management (Micro-Credential) - E  
Project Management - S (Micro-credentials)  
Supply Chain and Logistics - E  
Supply Chain Management - W



### Associate Degree

AAS Accounting - B  
AAS Accounting Management - E  
AAS Business - B  
AAS Business Professional - E  
AAS Farm Management - E  
AAS Supply Chain and Logistics - E  
Agribusiness Management - B, E  
Agribusiness Management - Crop Protect Technology Option - B  
Agribusiness Management Horticulture Option - Bk



### Bachelor's Degrees

Accountancy - W  
Business Administration - A  
Business Administration Management - A, S  
Human Resource Management - W  
Recreation, Park and Tourism Administration Option - Macomb, Quad Cities and Remote - W  
Tourism, Hospitality, and Event Management - Macomb, Quad Cities and Remote - W  
Supply Chain Management - W

## Appendix F – Energy and Utilities Sector

Energy and Utilities is a sector that demonstrates occupations with median hourly wages above living wage for occupations requiring a bachelor's degree and for occupations requiring no degree. Pathway guidance should focus on explicit specialized skills within the occupational clusters in the sector and transparency around what career opportunities there are and what is required to reach them. The sector is broken down into industries in Table F1, signaling the context of the pathway training needed for the region.

### O\*NET Clusters Included:

- Life, physical, and social science
- Installation, maintenance, and repair
- Construction and extraction
- Production
- Architecture and Engineering
- Transportation and Material Moving

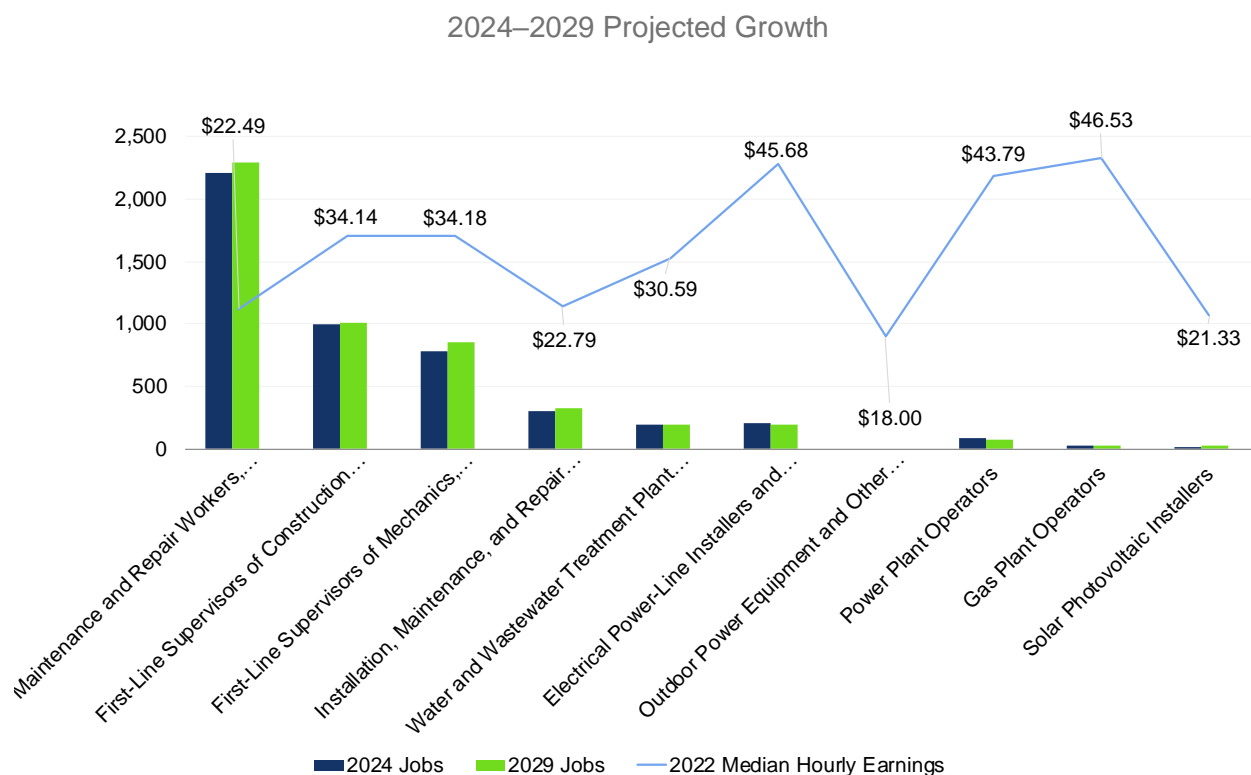
Occupations requiring less academic training and more on-the-job experience are shown in Figure F1, while advanced occupations are highlighted in Figure F2. Figure F1 shows occupations requiring no degree and there is a focus on repair workers and operators. Figure F2 shows the occupations requiring a bachelor's degree where the occupations are more engineering and science related.

**Table F1. Utilities Sector for the Quad Cities Region**

NAICS	Industry Description	2023 Hires	2024 Jobs	2029 Jobs	2024–2029 % Change	2024 Employment Concentration	Avg. Earnings Per Job	2023 Establishments
22111	Electric Power Generation	203	904	948	5%	5.24	\$203,905	8
22112	Electric Power Transmission, Control, and Distribution	45	191	142	(26%)	0.66	\$180,786	42
22131	Water Supply and Irrigation Systems	21	134	139	4%	2.19	\$93,000	5
22121	Natural Gas Distribution	<10	24	20	(16%)	0.18	\$144,163	3
22132	Sewage Treatment Facilities	<10	<10	<10	Insf. Data	0.06	Insf. Data	1

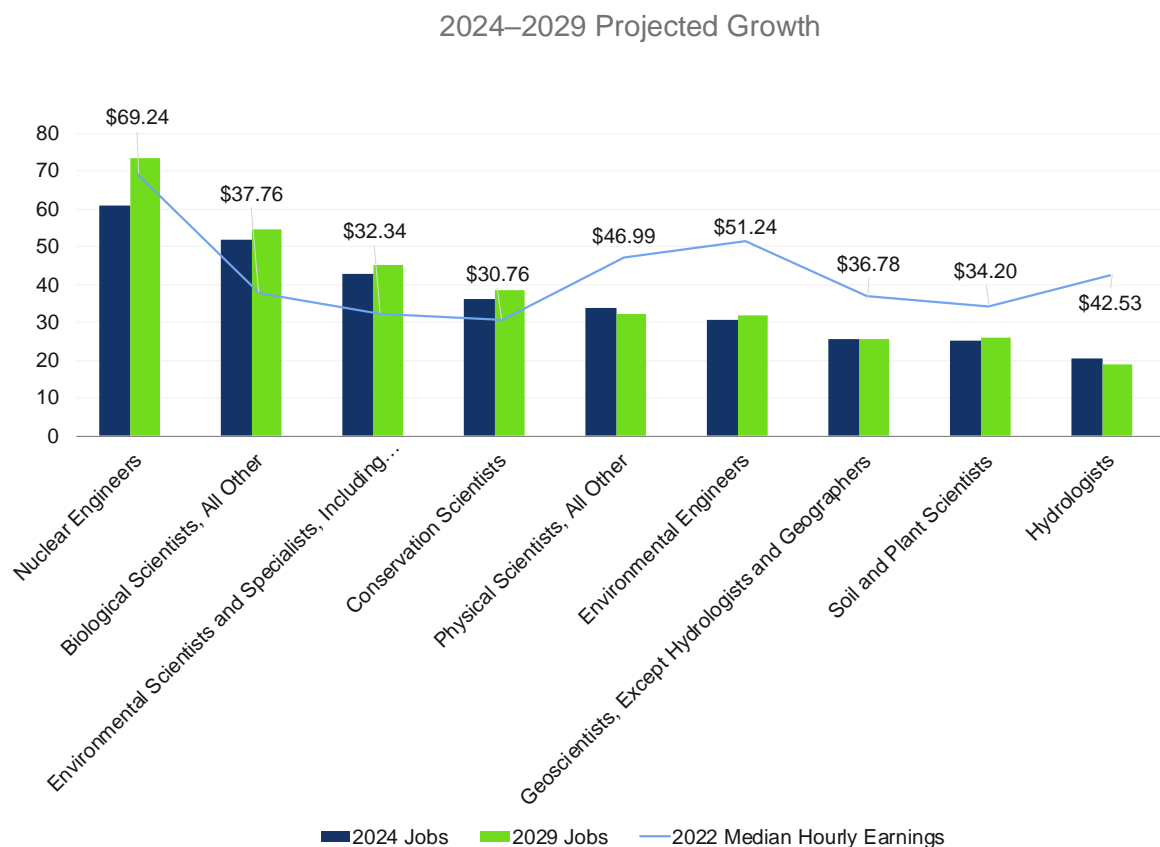
NAICS	Industry Description	2023 Hires	2024 Jobs	2029 Jobs	2024–2029 % Change	2024 Employment Concentration	Avg. Earnings Per Job	2023 Establishments
22133	Steam and Air-Conditioning Supply	0	0	0	0%	0.00	\$0	0

**Figure F1. Fastest Growing Occupations Requiring HS Diploma, Some College, or Credential**



Source: U.S. Bureau of Labor Statistics: Lightcast, 2024 Q1, Energy and Utilities occupations displayed by 6-digit SOC

**Figure F2. Largest Occupations Requiring a Bachelor's Degree**



Source: U.S. Bureau of Labor Statistics: Lightcast, 2024 Q1, Energy and Utilities occupations displayed by 6-digit SOC

## Appendix G: Thrive Quad Cities Replication Toolkit

The Thrive Quad Cities Replication Toolkit describes and provides guidance on the methodologies used to engage regional key interest holders; to conduct the education and economic analysis; and to consider for further replication in other geographic areas of the state. The approach and methodology for the qualitative data collection and analysis (i.e., engagement with key interest groups) are outlined in the first section of this toolkit, while the methods used to determine the education and economic analysis are outlined in the second section. Each section provides the following information and resources:

1. An overview of approaches used and why the approach is valuable (for more details see the full Thrive Quad Cities report and accompanying Appendix A on methodology)
2. Implementation tips and considerations
3. Materials for future use and consultation such as surveys, an interview protocol, and a static Thrive Quad Cities Dashboard

The toolkit was developed for the Illinois Board of Higher Education (IBHE) and can be used to establish a plan to replicate methods used during the Thrive Quad Cities Project in part or in whole.

### Section 1: Engagement with Key Interest Groups

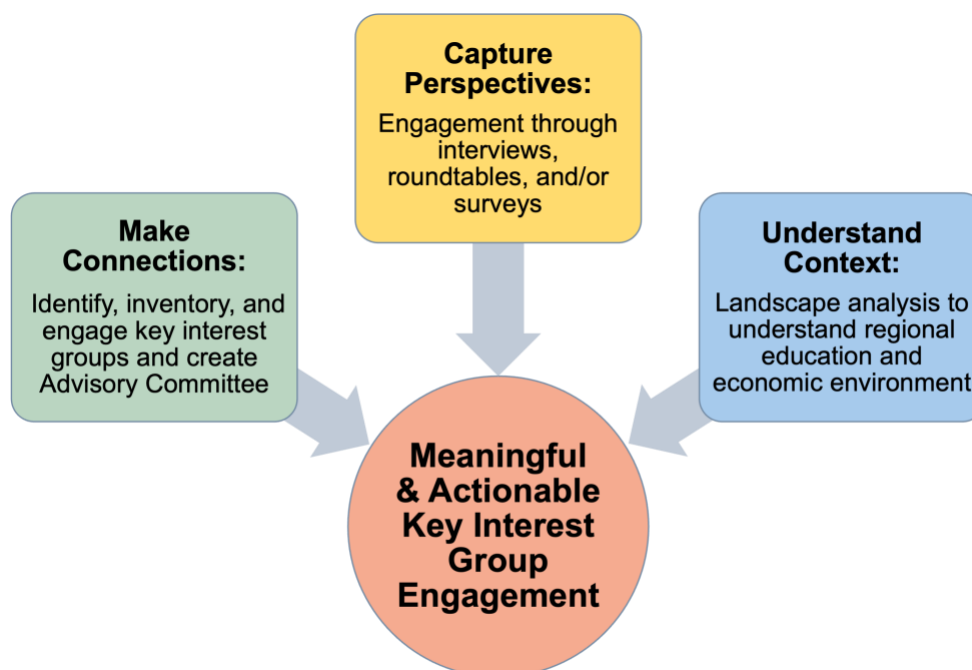
#### Methods, Data, and Analysis

Activities for successful engagement with key interest groups during the Thrive Quad Cities Project were guided by a qualitative data collection design that can be replicated in any region. The design included steps for making connections with key interest groups, capturing perspectives about education and career pathways in the Quad Cities, and understanding the regional education and workforce context. The project also looked to qualitative data to both supplement and drive takeaways from the quantitative analysis of education, economic, and workforce data.

The steps involved in the qualitative data collection design worked together to elicit meaningful and actionable interest group engagement. This layered approach additionally included ongoing analysis of key interest group feedback to help identify and check understanding about regional challenges, gaps, and opportunities. Figure G1 offers a model of the qualitative data collection's design and plan, followed by a description of the steps involved.



**Figure G1: Interest Group Engagement Methodology & Plan**



**Make Connections:** Making initial connections and identifying champions is essential to the engagement process. Interest groups who participated in the Thrive Quad Cities Project included champions from K-12 and higher education segments, regional industry and workforce, and community-based organizations. Sustaining these champions' ongoing buy-in and engagement is also important and can be codified by the creation of an advisory or steering committee with expectations for ongoing meetings and check-ins. The charge of this group is to help establish cogent understanding of the primary barriers causing gaps and challenges for a higher education system to support a thriving economy. The charge also focuses on identifying target strategies to address gaps and challenges, and strategizing plans for increasing and maintaining momentum across segments in the region. Input from key champions also aims to supplement individual interviews, roundtable discussions, and surveys giving context to quantitative education and economic data.

**Capture Perspectives:** Through individual key informant interviews, roundtable discussions, and surveys a broad understanding of the perceived needs, gaps, and opportunities in the region and by interest groups is gleaned. As a first step, a group of key interest holders from education, workforce, local officials, and community-based organizations is identified and contacted to help invite perspectives as grounding for further discussions.

**Understand Context:** The qualitative data triangulates with sets of publicly available and procured quantitative data, such as information on K–12 pathways, institutions of higher education and postsecondary options, and workforce programs and funding sources. Education and workforce data are shared with committee members and within roundtable convenings as part of presentation materials and to foster discussion group activities (e.g., through online activity boards, to corroborate or dive into statistical findings, etc.).

Once input from interviews, committee meetings, and roundtables has been collected, the content is coded and analyzed for themes and key takeaways. This thematic analysis looks for patterns that give meaning to insights. Themes are then reviewed across researchers and shared with committee meetings and roundtables at different points of time. Feedback mechanisms such as this serve to validate findings, to generate additional considerations, and to test assumptions.

### **Tips and Considerations**

Engagement with key interest groups is rooted in a complex qualitative data collection process that contains a set of considerations. Below are some key tips and considerations for the process.

- Recognize the importance of building rapport, trust, and engagement over time.
- Establish relationships with key interest holders such as champions and advocates to facilitate access and gain insights.
- Be mindful of interest holders' time when scheduling outreach and engagement activities.
- Allocate appropriate durations for different types of meetings: 30 minutes for informational interviews, 45–60 minutes for in-depth interviews, and 60–90 minutes for meetings with activities.
- Schedule faculty and student surveys around less busy academic periods to avoid conflicts.
- Provide incentives to key interest group members to increase participation and commitment.
- Leverage team members or allies who live in the region to broker connections with community members, to share on-the-ground insights, and to test assumptions.

### **Materials/Resources**

The Thrive Quad Cities qualitative data collection activities leveraged a range of materials and resources designed to support meaningful and interactive engagement efforts with key interest groups. This section briefly describes tools and artifacts that are helpful for structuring surveys, conducting interviews, and to guide activities for roundtable discussions and committee meetings, such as online activities.

- I. Surveys are useful tools to conduct outreach to a wide group of individuals and to gain feedback on a range of project topics. Outreach for survey responses is critical to build awareness about the project, what the benefits are for those who respond, and how the outcomes of the project will impact them. Without a local champion to help with survey outreach and dissemination, response rates may be low. However, any input received is useful and valid for connecting dots and learning new perspectives.

The summary below presents the three surveys developed for Thrive Quad Cities, while illustrative examples of the surveys are provided at the end of Appendix G. Though designed for the Quad Cities, these surveys could be modified as needed for other regions with varying characteristics.

- a. **Faculty Survey:** The survey tool asks a variety of questions to gather information about academic program alignment and regional industry needs.
  - b. **Industry Survey:** The survey asks a series of questions to gain knowledge of industry hiring needs for entry-level, mid-level, and upper/management positions; preferred skills/education requirements for applicants; and feedback on training programs for higher education programming.
  - c. **Student Survey:** The survey is asking students about their field of study, factors influencing their enrollment decision, long-term educational and career goals, plans to stay in the region for work, and future employment opportunities.
- II. Key informant interview protocols, roundtable protocols, and advisory committee agendas are all relevant ways to glean information. The questions asked in these protocols help to connect the project research questions with what interest holders and groups will share from their own contexts. As a sample of the kinds of questions to be asked, below is the interview protocol used during interviews with Higher Education leaders in the Quad Cities.

---

## Sample Questions for Higher Education Key Informant Interview

### A. Capturing Higher Education Understanding of Workforce/Industry Needs, Demand, and Program Offerings

1. How would you describe/characterize how higher education identifies and addresses the workforce landscape (e.g., demand and supply) in the Quad Cities?
2. What workforce/training options (e.g., career pathways and pipelines) do you provide at your institution(s) that align with the workforce landscape? With workforce needs? How do they align?
  - a. Which of the pathways/pipelines that you mention are most utilized (e.g., with students, with employers)? Why and how do you know? Probe for feedback collected, knowledge of outcomes, etc.
  - b. Which pathways/pipelines might need improvements? Why and how do you know?
3. **What additional or new pathways/program areas do you think are needed and why?**
  - c. Do you think that your institution can provide these programs? Why or why not?

### B. Higher Education Partnerships/Collaboration/Efforts with Industry/Employers

4. What key efforts (e.g., projects, campaigns, commitments) do you know of that are underway to promote higher education collaboration with industry sectors/employers?
5. Who does your institute partner with to promote workforce opportunities and success?
6. Does your institute collaborate with specific employers in the region for career programming and opportunities?
7. Do you feel that collaboration among higher education and employers/industry in the region could be done differently?

### C. Key Regional Pathway/Pipeline Successes and Challenges

8. Overall, what successes do you feel have come from higher education career pathways and pipelines in the region? (Probe with what institutions, for which types of students, for employers, and why are they successful?)
9. What challenges would you say higher education institutions have encountered with providing career pathways/pipelines
10. How has higher education tried to address these challenges (if at all)? What worked and what didn't?

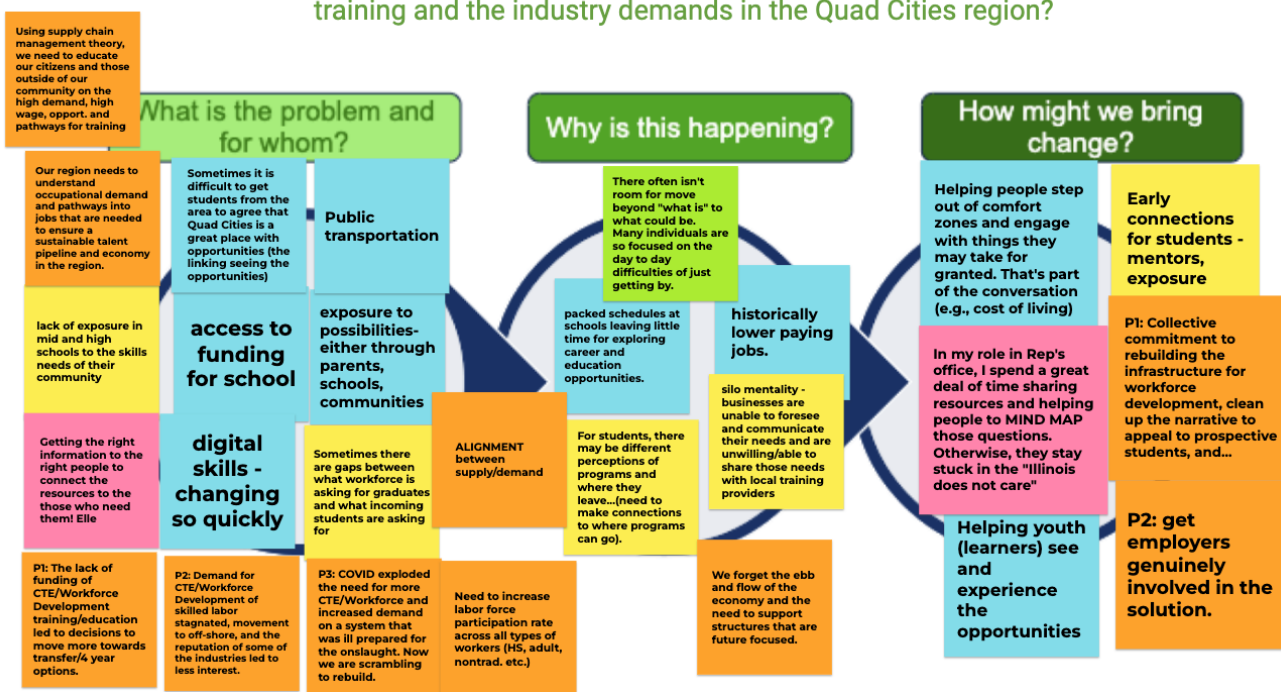
### D. Wrap Up

11. From the vantage point of higher education, what advice might you offer about providing and aligning career pathways and pipelines that meet industry and/or employer needs and demands?
12. Do you have any questions you would like to ask or final thoughts to share?

- III. During industry roundtables and advisory committee meetings, online activity boards are one interactive way to document perceptions and observations from key interest holders. These boards provide a virtual space for collaborative discussions where interest holders can respond to project questions, share experiences, and build on posted responses. Below is an example of an online activity board session conducted for Thrive Quad Cities.

## From your vantage point, what are the gaps or challenges between higher education/training and the industry demands in the Quad Cities region?

From your vantage point, what are the gaps or challenges between higher education/training and the industry demands in the Quad Cities region?



## Section 2: Education and Economic Analysis

### Methods, Data, and Analysis

To operationalize methods for the education and economic analysis, the project team used multiple data methodologies, points, and processes. Regional economic demand was derived by using indicators such as gross regional product, industry sector trends, and evidence-based metrics to determine the demand for labor. Regional supply was informed from postsecondary completions statistics curated from IPEDS, Lightcast, or directly from institutions of higher education as supplied by the Illinois Board of Higher Education (IBHE). The project team also

explored and reviewed workforce data, demographic data, and data around the existing state of higher education in the region.

Table G1 below summarizes the key data methodologies used to determine aspects of the project's education and economic analysis. The table also includes a high-level description of the data points and processes used. The table is followed by further details on some of the methodology choices made during the project and additional tips and considerations to inform decisions for replication.

**Table G1. Education and Economic Analysis: Data Methodologies, Points, and Considerations**

Methodology	Data Points and Considerations
<b>Determining Economic and Occupational Demand</b>  (Regional Economic Analysis, Occupational Cluster Analysis)	<ul style="list-style-type: none"> <li>• <b>Gross Regional Product (GRP):</b> GRP was used to identify the highest producing industry sectors in the region.</li> <li>• <b>Regional Demand for Labor:</b> Average annual job openings, average annual hires, past 5-year occupational growth, and employment concentration (i.e., location quotient).</li> <li>• <b>North American Industry Classification System (NAICS)<sup>12</sup> Code Levels:</b> Different NAICS code levels (2-digit sector and 3-digit subsectors) were used to contextualize understanding around labor needs.</li> <li>• <b>Occupational Trends:</b> Annual hires and annual job openings were explored at the 2-digit and 6-digit Standard Occupational Classification (SOC) level to analyze occupational trends. O*NET occupational clusters were also used.</li> <li>• <b>MIT Living Wage Data:</b> MIT Living Wage data was pulled from the Massachusetts Institute of Technology's Living Wage Calculator and used to determine county-level wage data. Determinations were identified for various family sizes within Rock Island County in IL. See the table below:</li> </ul>

<sup>12</sup> Lightcast taxonomy can differ significantly from standard NAICS codes (e.g., Government employment classifications). Review detail offered by Lightcast explaining these particulars and conventions used <https://kb.lightcast.io/en/articles/6957524-lightcast-naics>.



	1 ADULT				2 ADULTS (1 WORKING)			
	0 Children	1 Child	2 Children	3 Children	0 Children	1 Child	2 Children	3 Children
Living Wage	\$18.63	\$34.59	\$44.46	\$55.69	\$27.15	\$32.04	\$36.58	\$38.35
Poverty Wage	\$7.24	\$9.83	\$12.41	\$15.00	\$9.83	\$12.41	\$15.00	\$17.59
Minimum Wage	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00	\$14.00
<b>Reviewing and Analyzing Educational Programs and Pathways</b>  (K–12 and Higher Education Program Mapping)	<ul style="list-style-type: none"> <li>• <b>CTE Concentrators:</b> K–12 Career and Technical Concentrators data for Illinois (2022/2023) and Iowa (2021/2022).</li> <li>• <b>Higher Education Completions:</b> Higher education completion data from Illinois Community College Board (ICCB) for Black Hawk College’s 2022/2023 data; the Illinois Board of Higher Education (IBHE) for Western Illinois University Quad Cities (WIU-QC) 2022/2023 data, and from IPEDS 2021/2022 for all other institutions.</li> <li>• <b>Additional data:</b> Additional data explored clusters from advanced CTE and 2023 employment from Lightcast’s 2024 Q1 data release.</li> </ul>							
<b>Conducting a Postsecondary Workforce Analysis</b>  (Postsecondary Gap Analysis)	<ul style="list-style-type: none"> <li>• <b>Data on Supply:</b> Supply was measured as the average annual completions following the Classification of Instructional Programs (CIP) codes from regional postsecondary institutions. Data was collected from ICCB and IBHE for Black Hawk College and Western Illinois University Quad Cities campus. Completions data for the remaining regional postsecondary institutions came from the Integrated Postsecondary Education Data System (IPEDS). Data for academic years 2019/20 through 2021/22 were collected and the average across those three years was calculated.</li> <li>• <b>Data on Demand:</b> Data on demand was sourced from Lightcast which derives their data from the Bureau of Labor Statistics (BLS). Using the Standard Occupational Classification (SOC) system, demand is measured as the number of average annual job openings by occupation. Average annual job openings consider the number of workers needed to fill the growth of an occupation over a period and replace workers exiting an occupation. Average annual job openings by education level were extrapolated using</li> </ul>							

	<p>data on the highest level of educational attainment of workers aged 25 and above from the Employment Projections Program at the BLS. For this analysis, the time covered is 2024–2029.</p> <ul style="list-style-type: none"> <li>• <b>Worker Movement:</b> Workers exiting an occupation, referred to as replacement jobs, considers incumbent workers retiring or otherwise exiting the workforce and workers that change occupations. Annual job openings used in this analysis do not consider occupational churn, or in other words, the movement of a worker across employers but within the same occupation.</li> <li>• <b>CIP/SOC Crosswalk:</b> The National Center for Educational Statistics (NCES) and the BLS provide a publicly available CIP to SOC crosswalk which is regularly updated. The crosswalk matches postsecondary programs with the occupations. To join the supply and demand data, average annual openings were matched to the corresponding SOC codes for each respective program, while completions within each CIP code were aggregated across institutions in the Quad Cities.</li> <li>• <b>Deduplication:</b> Further consideration was given to the regional nature of the analysis. Within the CIP SOC crosswalk, SOC's matched to each program that graduates would be prepared for, which in some cases results in duplication across groups of similar programs. For this analysis the average annual openings were reported as unique values following a process of deduplication. For each instance an SOC occurred in the regional CIP SOC crosswalk a uniform weight was assigned and used to adjust the average annual openings.</li> </ul>
<p><b>Exploring Equity Gaps</b></p> <p>(Equity Analysis)</p>	<ul style="list-style-type: none"> <li>• <b>Demographic Data:</b> The Equity analysis cross referenced postsecondary completion data with aggregated regional data on population by race and ethnicity and poverty portions. These data were primarily analyzed for race and ethnicity to look for disproportionate impacts.</li> </ul>
<p><b>Conducting a Skills Gap Assessment</b></p> <p>(Skills Gap Assessment)</p>	<ul style="list-style-type: none"> <li>• <b>Specialized skills:</b> The frequency with which specialized skills were found in regional job postings was obtained through Job Postings Analytics in the Lightcast database. This became the foundation for the skills tables by field of study categorized by entry, middle, and advanced skills, and corresponding</li> </ul>



	occupations. The occupations presented in the skills tables by field of study are not exhaustive; they reflect the occupations in the highest demand per sector as seen in the Deep Dive section. Fields of study were included as aligned with the Deep Dive sectors and occupational clusters.
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### Additional Details

In addition to the data methodologies, points, and processes described above, the project team made methodological and analytical choices that supplemented and cross-referenced data inquiry processes when relevant. Some of these choices included:

**Providing Multiple Models of Analysis:** Using the Advance CTE and NCES CIP-SOC crosswalks to analyze program completions by occupational cluster, the team provided institutions of higher education with two models to better understand regional economic demand: (1) an analysis that demonstrates a labor shortage as derived from cross-referencing annual openings against completions from aligned fields of study across the top five sectors and corresponding occupational clusters, and (2) industry sector and occupational deep dives for the top five sectors and occupational clusters in the region that demonstrate occupational demand and with a look at completions by race/ethnicity, gender, and non-resident status. Industry sector deep-dives are provided to demonstrate the context within which high-demand, cross-cutting careers are situated.

Furthermore, the demand derived from the quantitative data, qualitative interviews, and completion mapping directed the focus of the academic program review and support services inventory. In turn, that review focused on programs that contain the skills and competencies desired for entry, mid, and advanced level jobs to assess alignment against program SLOs or content along with assessment of the learning modality (condensed, hybrid, accelerated, industry credentials, etc.) based on industry and community needs.

**Leveraging Comparative Analysis and Triangulation:** The supply and demand analysis conducted sought to answer the following questions:

1. Are higher education pathways in the region aligned to and supplying the regional labor market?
2. What gaps exist in those pathways?
3. Where are labor shortages in demand occupations and industries?

The approach taken to answer these questions included conducting a comparative analysis of in-demand higher education programs, particularly focusing on the community colleges and public/private universities in the region. Learning from qualitative themes around supply and demand and reviewing these against the quantitative economic data collected allows for the critical process of triangulation to occur. The triangulation of data sources validates the alignment between higher education pathways and regional labor market needs, as it allows for a cross-examination of qualitative themes and quantitative economic data to identify existing gaps and labor shortages. By comparing insights from qualitative discussions about supply and demand with quantitative economic data, triangulation ensures a robust and comprehensive analysis, enhancing the reliability of the conclusions drawn about the supply of educated workers and the demands of the regional labor market.

**Incorporating Pathway Mapping:** Pathway mapping was also part of the analysis. The approach used included reviewing academic programs for the top five industries and occupational clusters to assess alignment with the skills and competencies being taught and those some regional employers indicated as desired for entry, mid, and advanced level jobs. That information was pulled from survey responses, committee meetings, and informal interviews. Additionally, the mapping allowed for a review of learning access points such as program content and modality against workforce system ETPL alignment, student supports if available, and workforce system OJT/WEX to higher education connections. This allowed for further identification, contextualization, and synthesis to itemize regional opportunities, gaps, and challenges.

**Using Various Approaches and Reports to Analyze Regional Occupational Demand and Industry Trends:** Several methodological approaches can be considered when analyzing the regional occupational demand and industry trends for a region. First, analysis of existing reports and trends based on CEDS, the LWIA plan, Chamber reports, and Illinois Manufacturing Excellence Center Pathway reports were reviewed. These documents pointed to indications of priority industries targeted for growth and expansion.

The analysis also included identifying regional economic trends to include openings, closings, increases or reductions in specific industries over time, and past and forecasted trends. Forecasts were examined for both growth and/or slowing demand. Finally, a review to identify occupations with translatable skills for upskilling in higher education was conducted to understand areas of lateral mobility in the job market.

In addition to the data points listed in Table 1, the data used to conduct the regional economic analysis included various reports pulled through Lightcast and investigation into emerging technologies as follows:

- Largest sectors (2 digit)
- Fastest growing sub-sectors (3–4 digit)
- Median hourly earnings
- Educational attainment
- Specialized skills data through Lightcast Job Postings Analytics
- Software skills data through Lightcast Job Postings Analytics

**Higher Education Review:** Additional information pulled to examine the higher education participation and completion in the region included the following data:

- 5-year trends
- Impact of COVID on enrollment for regional community colleges and public/private post-secondary institutions
- Raw program enrollment and completion data
- Certificate/degree type
- Age
- Gender
- Income (using financial aid status)

**Exploring Intersegmental Alignment:** A scan was also conducted to analyze the alignment of pathways between adult education, K–12, and higher education in relationship to regional demand. Taking an intersegmental approach, the analysis looked to underscore equity by exploring who participates in education across each segment compared to who completes higher education pathways leading to living jobs.

### **Tips and Considerations**

In any analysis there will be assumptions regarding the data used and the variability within the data. The following set of bullet points bring to attention assumptions and decisions to consider, and that were made, for conducting an economic demand and equity analysis.

- Adjustments to data pulled often need to be made based on low quantities, in most cases quantities below 10.
- Data pulled from publicly available data often experience a lag in data collection or data updates. This will result in changed numbers, which could be perceived as discrepancy over time once new updates have been released.
- Different data sources use different data methodologies which can affect the numbers in an analysis.

- When aggregating and weighing completion data, different aggregation could lead to different total numbers. This is due to the type of weighing being used, which will differ from using completion data by itself, and connecting completion data to occupational data (CIP to SOC crosswalk).

Specific consideration to the methods employed in the postsecondary workforce analysis should also be given when replicating this analysis. Alternative variables or data sources are available for most of the data used within the analysis. Institutional acceptance and consensus are important considerations when developing these models. Table G2 provides an example of data and methods used in the analysis and alternatives that could be used instead.

**Table G2: Postsecondary Workforce Alternative Variable & Methods Examples**

Variable/Method Used	Alternative Variable/Method
Average Annual Job Openings	12-month Job Postings
Average Annual Completions	Average Annual Enrollments
NCES/BLS CIP-SOC Crosswalk	Proprietary/Institutional CIP-SOC Crosswalk
Deduplication – Uniform Weighting	Deduplication – Scaled Weighting
Results Reported by CIP Code	Results Reported by SOC Code
BLS Educational Attainment by Occupation	BLS Typical Entry Level of Education

The labor shortage model used for Thrive Quad Cities followed contemporary processes for analyzing workforce demand and supply. Workforce demand encompassed annual openings by SOC codes mapped to CIP codes utilizing a CIP-SOC crosswalk. Supply was measured through completions at post-secondary institutions. The resulting analysis demonstrated post-secondary alignment to the regional economy and the extent to which workforce needs are being met. Similarly, the industry deep dive model used demonstrated program completions in terms of occupational clusters within top growing and emerging sectors, and occupational demand against post-secondary supply.

### Materials/Resources

The data described are best illustrated in the Thrive Quad Cities final report. However, another way to view a portion of this data is using a compilation of this labor market information in a Tableau data dashboard. This dashboard identifies industry, occupation, and CIP SOC

crosswalk details for the region and could be set up to be dynamic or static. The Thrive Quad Cities [static regional dashboard is located here](#). A list of the resource tables in the dashboard are below.

- Sectors in the Region
- 10 Largest Subsectors in the Region
- 10 Largest Industries in the Region
- Main Occupation Groups in the Region
- 10 Largest Occupation Groups
- Top 10 Changing Occupations in the Region
- Institutional Completion (CIP to SOC Crosswalk)
- Educational Attainment for Workers 25 Years and Older by Occupation

### Surveys

Please find examples of the three surveys developed for Thrive Quad Cities starting after this page.

## Thrive Quad Cities Industry Survey

**On behalf of the Illinois Board of Higher Education (IBHE), WestEd is sending you a short survey to gain knowledge of academic program alignment, measurement, and industry connectivity as it relates to local/regional industry needs. The work is part of the Thrive Quad Cities project and will inform a workforce and education analysis and strategy for the region.**

**The survey should take less than 10 minutes to complete. Your responses will help to allow our team to properly plan and strategically design workforce solutions for the region.**

**We appreciate your time, participation, and help with building a talent pipeline for the Quad Cities.**

\* 1. Please select the sector your company represents.

- ☐ Healthcare
- ☐ Manufacturing
- ☐ Transportation and Warehousing
- ☐ Construction
- ☐ Digital Technology
- ☐ Energy
- ☐ Agriculture
- ☐ Utility
- ☐ Industry Association
- ☐ Nonprofit
- ☐ Other (please specify)

2. What is the name of your company?

\* 3. What is the employee size of your company/organization?

- ☐ 1-10
- ☐ 10-25
- ☐ 25-50
- ☐ 50-100
- ☐ 100+

\* 4. What are your current hiring needs? *(Check all that apply)*

	Entry level positions	Mid-level positions	Upper/Management positions
Immediately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Within the next 7 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Within the next 30 days	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Within the next 6 months	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Within the next year	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

\* 5. What skills/education requirements are preferred for applicants? *(Check all that apply)*

	Entry level positions	Mid-level positions	Upper/Management positions
No experience needed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Internal training provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short term industry specific training	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some technical experience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2 year college	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4 year college	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
None of the above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

\* 6. Are industry credentials a requirement for job applicants?

	Entry level positions	Mid-level positions	Upper/Management positions
Yes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* 7. What credentials do you require for employment? *(Check all that apply)*

	Entry level positions	Mid-level positions	Upper/Management positions
Lean/Six Sigma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Project Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data Science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Word	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Excel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PowerPoint	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SAP Applications	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Python	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SQL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Registered Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Licensed Practical Nurse	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Process Improvement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Data science/Data analytics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Power BI	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Java	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Automation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Auto CAD/Solidworks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Accounting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lab sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

\* 8. Does your firm engage with institutions of higher education in the Quad Cities region to enhance exposure to jobs in your field or recruit directly ?

- ☐ Yes  
☐ No  
☐ I don't know



\* 9. In what way do you currently engage with institutions of higher education? *(Check all that apply)*

- ☐ Guest speaking in the classroom
- ☐ Plant tours
- ☐ Internships
- ☐ Registered apprenticeships
- ☐ Job shadowing
- ☐ Participation in college advisory boards
- ☐ Other (please specify)

\* 10. Do you provide assistance for employees seeking industry credentials?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 11. How often do you hire graduates from the following Institutions?

	Often	Sometimes	Rarely	Never
Western Illinois University (WIU)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Augustana University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Black Hawk College	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Iowa Community College	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
St. Ambrose University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 12. In your experience, to what extent do the following local educational entities provide access to a locally trained workforce? (Check all that apply)

	Good Quantity	Good Quality	Quantity Needs Improvement	Quality Needs Improvement	Not Applicable
High School Graduates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Black Hawk Community College	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eastern Iowa Community College	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Western Illinois University (WIU)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Augustana University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
St. Ambrose University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Iowa State University	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Local Labor Unions (Training and apprenticeship programs)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Thinking about these higher education institutions and their related programs, is there anything about these training programs that you would enhance or improve? Please elaborate below.

\* 14. What type of specific training do you support? (Check all that apply)

- ☐ Training reimbursement
- ☐ Time off for training
- ☐ In house training
- ☐ I don't know
- ☐ Other (please specify)

\* 15. What types of course schedule would enhance your employee professional development and training? *(Check all that apply)*

- ☐ Evening courses
- ☐ Weekend courses
- ☐ Accelerated courses
- ☐ Certificate programs
- ☐ On site courses
- ☐ Online courses
- ☐ Short term courses
- ☐ I don't know

**Thank you for your answers!**

## Thrive Quad Cities Faculty Survey

**On behalf of the Illinois Board of Higher Education (IBHE), WestEd is sending you a short survey to gain knowledge of academic program alignment, measurement, and industry connectivity as it relates to local/regional industry needs. The work is part of the Thrive Quad Cities project and will inform a workforce and education analysis and strategy for the region.**

**The survey should take less than 10 minutes to complete. Your responses will help to allow our team to properly plan and strategically design workforce solutions for the region.**

**We appreciate your time, participation, and help with building a talent pipeline for the Quad Cities.**

\* 1. With which institution are you affiliated?

- ☐ Augustana College
- ☐ Blackhawk Community College
- ☐ Eastern Iowa Community College
- ☐ Northern Illinois University
- ☐ St. Ambrose College
- ☐ University of Illinois Urbana-Champaign
- ☐ Western Illinois University
- ☐ Western Illinois University (Quad Cities)
- ☐ Other (please specify)

\* 2. With which field of training/program area are you best affiliated at your institution?

\* 3. Do you feel that the program you are a part of at your institution prepares students for viable job opportunities in the region?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 4. To what extent do you feel that your program prepares students for viable job opportunities?

Great extent	Somewhat	Very little	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 5. To what extent do you agree that your program aligns to industry demands and needs?

Strongly agree	Agree	Neutral/Undecided	Disagree	Strongly disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Why do you feel that your program is not aligned to industry demands and needs?

\* 7. Are there working collaborations with existing industry or employers on your program area's design?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 8. In what way do you currently engage with existing industry or employers?(*Check all that apply*)

- ☐ Meetings with industry leaders and representatives
- ☐ Community round table discussions
- ☐ Survey feedback and suggestions
- ☐ One-on-one outreach meetings with companies
- ☐ Direct collaboration on curriculum development
- ☐ Other (please specify)

\* 9. What work aligned learning opportunities does your program provide to students? (*Check all that apply*)

- ☐ Apprenticeships (Paid)
- ☐ Apprenticeships (Unpaid)
- ☐ Career fairs
- ☐ In-class employer visits
- ☐ Informational interviews
- ☐ Internships
- ☐ Job shadowing
- ☐ Mentorship
- ☐ Mock interviews
- ☐ Practicum
- ☐ Volunteer opportunities
- ☐ Work-based learning (WBL)
- ☐ Workplace simulations
- ☐ Workplace tour
- ☐ Other (please specify)

\* 10. To what extent do you feel that students in your program learn the following:

	To a great extent	Somewhat	Very little	Not at all
Adaptability skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Client management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer service skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good work habits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupation specific skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 11. Do you feel that students are learning the skills that are preparing them for local/regional jobs?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 12. To what extent are the skills students are learning preparing them for employment?

To a great extent	Somewhat	Very little	Not at all
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. Why do you feel that the skills students are learning are not preparing them for local/regional jobs?

\* 14. Are students entering program-aligned jobs?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 15. How are student job placements measured? *(Check all that apply)*

- ☐ Student outreach
- ☐ Case management
- ☐ Student feedback
- ☐ Company feedback
- ☐ I don't know
- ☐ Other (please specify)

16. Is there anything else that you would like to share about your program?

**Thank you for your answers!**



## Thrive Quad Cities Student Survey

**On behalf of the Illinois Board of Higher Education (IBHE), WestEd is sending you a short survey to gain knowledge of students' participation and experiences with academic programming and skills development as it relates to the local/regional workforce and industry needs. The work is part of the Thrive Quad Cities project and will inform a workforce and education analysis and strategy for the region.**

**The survey should take less than 10 minutes to complete. Your responses will help to allow our team to properly plan and strategically design workforce solutions for the region in ways that keep your experiences in mind.**

**We appreciate your time, participation, and help with building a talent pipeline for the Quad Cities region.**

\* 1. Which school do you attend?

- ☐ Augustana College
- ☐ Blackhawk Community College
- ☐ Eastern Iowa Community College
- ☐ Northern Illinois University
- ☐ St. Ambrose College
- ☐ University of Illinois Urbana-Champaign
- ☐ Western Illinois University
- ☐ Western Illinois University (Quad Cities)
- ☐ Other (please specify)

\* 2. Which field of training/program area of study best matches the program where you are currently enrolled? (*Check all that apply*)

- ☐ Healthcare
- ☐ IT/Digital Technology
- ☐ Manufacturing
- ☐ Transportation
- ☐ Management (Business Administration & Leadership Pathways)
- ☐ Warehousing & Wholesale Trade
- ☐ Other (please specify)

\* 3. Which of the following influenced your decision to enroll in your program? *(Check all that apply)*

- ☐ Opportunity to earn stackable certificates
- ☐ Interest in locally available jobs
- ☐ Experience in locally available jobs
- ☐ Work based learning opportunities (e.g., availability of internships, job shadowing possibilities, etc.)
- ☐ Flexible scheduling
- ☐ Technology supports and resources
- ☐ Success in other classes in this program
- ☐ Career guidance and services offered for the program (e.g., counseling , integrated career guidance)
- ☐ Other (please specify)

\* 4. What is your long-term educational goal?

- ☐ Earn a certificate
- ☐ Earn an Associate's degree
- ☐ Earn a Bachelor's degree
- ☐ Earn a Master's degree
- ☐ I don't know
- ☐ Other (please specify)

\* 5. What is your current career goal?

- ☐ Get a job
- ☐ Get a better job
- ☐ Get a raise
- ☐ Change careers
- ☐ Advance in my current job
- ☐ I don't know
- ☐ Other (please specify)

\* 6. Do you plan to stay in the Quad Cities region for work?

- ☐ Yes
- ☐ No
- ☐ I don't know

7. Why don't you plan to stay in the Quad Cities for work?

\* 8. How do you feel about current employment opportunities in this region?

Excellent	Good	Average	Poor
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 9. How do you feel about future employment opportunities in this region?

Excellent	Good	Average	Poor
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 10. To what extent do you feel that you are learning the following skills in your program:

	To a great extent	Somewhat	Very little	Not at all
Adaptability skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Client management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Customer services skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Good work habits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Math skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Occupation specific skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reading skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Team work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 11. Do you feel that the skills that you are learning in your program are applicable to the career/job you plan to work in?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 12. To what extent do you feel that the skills you are learning in your program are preparing you for job opportunities in the region?

To a great extent

Somewhat

Very little

Not at all

☐☐☐☐

13. Why don't you feel the skills you are learning in your program apply to the career/job you plan to work in?

\* 14. Is your program currently providing you with real work opportunities (e.g., within the program area, within a field of study, or in industry)?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 15. What type of real work opportunities is your program offering? *(Check all that apply)*

- ☐ Apprenticeships (paid)
- ☐ Apprenticeships (unpaid)
- ☐ Career fairs
- ☐ In-class employer visits
- ☐ Informational interviews
- ☐ Internships
- ☐ Job shadowing
- ☐ Mentorship
- ☐ Mock interviews
- ☐ Practicum
- ☐ Volunteer opportunities
- ☐ Work-based learning (WBL)
- ☐ Workplace simulations
- ☐ Workplace tour
- ☐ Other (please specify)

\* 16. Are you experiencing any challenges to participating in your program?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 17. What challenges to participating in your program are you experiencing?(Check all that apply)

- ☐ Class availability
- ☐ Class Times
- ☐ Daycare
- ☐ Degree or certificate requires too much time
- ☐ Housing
- ☐ Internet access
- ☐ Lack of connection with faculty
- ☐ Lack of support program
- ☐ Program options
- ☐ Teaching styles
- ☐ Transportation
- ☐ Tuition costs
- ☐ Other (please specify)

\* 18. Does your program provide career guidance or support?

- ☐ Yes
- ☐ No
- ☐ I don't know

\* 19. What type of career guidance or support does your program offer? (Check all that apply)

- ☐ Career counselor
- ☐ Career center
- ☐ Guidance from faculty member
- ☐ Other (please specify)

\* 20. Rate the extent to which you agree/disagree with the following.

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I know where to go to find a job/career advice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know what internships opportunities are available within my program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I felt supported by program faculty to make career decisions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I learned more about a career through participating in my program	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My program introduced me to multiple career options	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My program provides connections to local employers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My program provides connections to work- based learning experiences/opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

\* 21. What is your number one go-to resource to learn about careers and/or job opportunities?

- ☐ Job fair
- ☐ Program/Department faculty
- ☐ Advisory in my major
- ☐ General Counselor
- ☐ Other (please specify)

\* 22. Do you have any recommendations that would improve your program experience?

- ☐ Yes
- ☐ No
- ☐ I don't know

23. What recommendations do you have to improve your program experience?

**Thank you for your answers!**