



REGISTERED APPRENTICESHIPS IN MICHIGAN

STATE OF MICHIGAN
Department of Technology, Management & Budget
Bureau of Labor Market Information and Strategic Initiatives

REGISTERED APPRENTICESHIPS IN MICHIGAN

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THE MICHIGAN STATE APPRENTICESHIP EXPANSION TEAM

Michigan Department of Labor
and Economic Opportunity

APPRENTICESHIP PHOTOGRAPHY:

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ABOUT THIS REPORT

This report is the product of a partnership between the Michigan Department of Technology, Management and Budget's Bureau of Labor Market Information and Strategic Initiatives and the Michigan Department of Labor and Economic Opportunity. It is designed to examine the state of registered apprenticeships in Michigan from two angles. The first section highlights the current landscape, support system, and resources for registered apprenticeships in Michigan. The second section offers an update and expanded detailed look at current and historical registered apprenticeship numbers and characteristics across the state.

TABLE OF CONTENTS

- 4 Expanding Registered Apprenticeship in Michigan
- 12 Michigan Registered Apprenticeships by the Numbers



Executive Summary

In 2020, there were just over 19,100 active registered apprentices in Michigan. Nearly 82 percent of these active apprentices were in the traditional apprenticeship industries of *Construction* and *Manufacturing*.

Representation of nontraditional apprenticeship industries has been increasing since 2017. Prior to 2017, there was only one year (2014) where there were more than 1,000 new registered apprentices. From 2017 to 2020, there has been an average of more than 1,500 new apprentices in nontraditional industries each year. Increases in industries like *Retail trade* and *Health care and social assistance* have played a significant role in the diversification of industries.

A key push among those involved with Michigan registered apprenticeship is increasing the representation of several demographic groups. From 2008 to 2017, just 5.8 percent of new apprentices were women. From 2018 to 2020, this share has increased to 15.4 percent. Similarly, the share of new apprentices who are people of color has increased from 9.8 percent in 2008–2014 to 12.8 percent in 2015–2020.

While *Electricians* and *Construction laborers* remained the top occupations among active apprentices, other occupations have also grown significantly in recent years. From 2008 to 2017, *Nursing assistants* averaged little to no new apprentices while *Pharmacy technicians* had fewer than 50 each year. From 2018 to 2020, these occupations both averaged just under 250 new apprentices annually.

Among the 10 prosperity regions, the Detroit Metro region had the largest share (42.2 percent) of 2020 active apprentices. East Michigan (15.6 percent) and West Michigan (13.3 percent) followed, while West Michigan had the largest share of active programs (30.6 percent).

Apprenticeship data were linked with administrative wage record data to analyze employment outcomes of 2019 apprenticeship completers one year after completing. The median hourly one-year-post-completion wage was \$32.22. These completers also had an employment percentage of 95.9 percent.



**EXPANDING REGISTERED
APPRENTICESHIP
IN MICHIGAN**

Michigan Apprenticeship Network

Michigan's business climate and economy is beginning to recover from the devastating effects of the COVID-19 pandemic. However, the growing shortage of skilled workers threatens the state's economic competitiveness, and in the recovery process, new and emerging skill sets are a critical success factor. As more employers across a wide spectrum of industries, and in multiple regions throughout the state, become familiar with the Registered Apprenticeship (RA) training model and its related benefit to all stakeholders, there is a growing demand in Michigan for new apprentices.

There is a need for adults who can move quickly from novice to journeyworker status, with or without experiential and pre-existing academic qualifications. There is also an equally important need for a pipeline of youth to fill future job vacancies due a retiring

workforce, or to fill new jobs emerging through advancing technology. These opportunities exist, not only in the traditional skilled trades, like construction, but also in healthcare, information technology, and advanced manufacturing.

In recent years, Michigan has deployed a variety of approaches to promote, support and expand the use of the RA training model and the state is currently among the national leaders in the use of RAs to grow talent. The state's apprenticeship network continues to grow the number of opportunities to ensure more job seekers and students gain in-demand skills without extensive tuition debt, while also earning a national industry-recognized credential upon program completion—supporting the governor's Sixty by 30 goal, while employers get the talent they need to grow and thrive.

National Support for Michigan Expansion

U.S. Department of Labor, Michigan Office of Apprenticeship

Michigan is one of 25 U.S. Department of Labor, Michigan Office of Apprenticeship-supported states (USDOL-MiOA) in which Registered Apprenticeship Program (RAP) registration and oversight is facilitated by federal partners through state field offices. USDOL-MiOA is responsible for supporting and validating the establishment of new and the expansion of existing apprenticeship programs that meet the parameters established under the National Apprenticeship Act (see 29 C.F.R. Part 29).

Apprenticeship State Expansion

In July 2019, Michigan was awarded \$3,239,482 for the Apprenticeship State Expansion (ASE) grant program. Going PRO Apprenticeships (GPA) was designed to expand a best practice from the Going PRO Talent Fund. The state-funded Going PRO Talent Fund has been heralded as one of the most powerful tools in Michigan's toolkit to address in-demand skill growth and employer talent needs. The program allows up to \$3,000 per trainee for new USDOL RAPs to offset training costs. GPA goals are to; 1) expand the number of apprentices in RAPs; 2) increase the diversity of apprentices and apprenticeship across industry sectors; and 3) support the integration of RAPs into state workforce development, education, and economic development programs. GPA will increase the number of apprentices by 800 statewide.

Youth Apprenticeship Readiness Grant

In July 2020, Michigan received \$4,881,369 for the U.S. Department of Labor (USDOL) Youth Apprenticeship Readiness Grant Program to expedite skill and career pathway development for youth enrolled in secondary (primary focus) or postsecondary education through co-enrollment in Registered Apprenticeship Programs (RAPs). The four-year Michigan Youth Apprenticeship Readiness Network (MiYARN) will accelerate growth of more than 1,000 Youth Registered Apprentices (YRA), of which 124 will be youth with disabilities. These youth, ages 16 to 24, will gain national industry-recognized credentials, and immediately fill critical openings in high-skill, high-wage careers in advanced manufacturing, construction, energy, healthcare, information technology and mobility sectors.

Building State Capacity to Expanding Apprenticeship Through Innovation

In July 2020, Michigan also received a U.S. Department of Labor (TEGL-15-19) "Building State Capacity to Expand Apprenticeship through Innovation" Grant Program for \$9,447,859 to strategically scale the use of the RAP model in the state. The three-year Michigan Registered Apprenticeship Innovation Network (MiRAIN) program will accelerate the growth of more than 5,230 workers through RAPs in high-skill, high-wage, in-demand careers sectors like advanced manufacturing, construction, energy, healthcare, information technology, and mobility. MiRAIN activities will improve and expand RAP infrastructure through state-level innovation and regional implementation. A state-level [Michigan Apprenticeship Advisory Board](#) with membership from industry, business associations, labor organizations, secondary and postsecondary education, government and the USDOL-MiOA has been established to provide guidance on innovations for Regional Implementation Consortia (RIC) now working together across the state.

State Apprenticeship Expansion, Equity, and Innovation Grants

In June 2021, the U.S. Department of Labor announced that the Michigan Department of Labor and Economic Opportunity (LEO) - Workforce Development was awarded \$10 million in State Apprenticeship Expansion, Equity, and Innovation grants funding to further expand RAP opportunities in the state. The award was based on a commitment to increase RAP diversity, equity, and inclusion through the Michigan Statewide Targeted Apprenticeship Inclusion & Readiness System (MiSTAIRS). MiSTAIRS is a partnership between LEO, the Michigan Works! network, the Michigan Career & Technical Institute, the Michigan Association of Community and Adult Education, and the Access to Apprenticeship Consortium led by labor organizations and associated contractors. Grant activities benefit those most severely impacted by COVID-19 through RAP opportunities for 1,640 citizens with a focus on women, people of color, individuals with disabilities, and those without a high school equivalency diploma or equivalent.

Under the MiSTAIRS program, Michigan will further develop and implement Pre-Apprenticeship Readiness programs across the state and providing direct entry into Apprenticeship Readiness program opportunities, specifically for underrepresented populations. Eight to nine weeks of Pre-Apprenticeship Readiness is a proven method of diversifying RA talent pipelines. Apprenticeship Readiness programs across the state prepare participants for entry into RAP opportunities, specifically for underrepresented populations who face additional challenges to passing entrance and assessment exams.



State of Michigan Support for RA Expansion

State of Michigan – State Apprenticeship Expansion

LEO champions the efforts of public-private partners to support and expand RAP opportunities for all citizens. In partnership with the USDOL-MIOA, the State Apprenticeship Expansion team contributes to the growth of opportunities through policy, partnership, and practice in the support of (1) sector partnerships; (2) employer reimbursement; (3) establishment of the Apprenticeship Success Coordinator (ASC) function within the Michigan Works! network; and (4) expanded diversity, equity, and inclusion for participants in new RA opportunities across the state.

Michigan Works! Network, Apprenticeship Success Coordinators

Apprenticeship Success Coordinators (ASCs) assist in the development of new RAPs in high-wage, in-demand industries and occupations. Their work accelerates the apprentices' ability to reach full proficiency through reduced time and effort (and thus costs) expended by the employer on registration, recruitment, and administration. ASCs also alleviate employer sponsors' apprehension and concerns by functioning as facilitators, problem solvers, systems change agents, and relationship builders in support of apprenticeship

expansion. The coordinators help businesses, intermediaries, and education and training providers effectively launch new RA programs. Through this role, the ASCs are increasing capacity to provide technical assistance to expand RAPs in the state, resulting in more than 2,500 additional new RAPs since 2017.

Apprenticeship Launch Network

Michigan's Apprenticeship Learning Network (ALN) and its related workshops move state level strategies into regional initiatives creating an integrated network of partners, knowledge, and progress. To stimulate improved performance, LEO reset this network and related workshops to the "Apprenticeship Launch Network" (ALN) to better describe the goal, help accelerate expansion and inclusion, and validate the urgency needed to ensure program success.

State level Apprenticeship Launch Network (ALN) workshops, attended by RA stakeholders, have become increasingly "action-based, hands-on workshops". Regional employers are recruited as key workshop participants to help lead "launch" activities. New employers can attend and leave with development of an RAP already started. These workshops focus on increasing both the number of RAs, and the number of "underrepresented participant friendly" RAPs.

Going PRO Talent Fund

In 2013, Michigan created the Going PRO Talent Fund to provide competitive awards for employer-responsive training to enhance employee productivity and employment retention, while increasing the quality and competitiveness of the state's businesses. The program ensures that Michigan employers have access to the talent pipeline they need to compete and grow, and participants have the skills they need for in-demand jobs. The program creates and expands collaboration between the Michigan Works! network, economic development, and educational agencies by funding demand-driven training that addresses talent shortages hampering the growth of Michigan's priority industries. The Going PRO Talent Fund provides up to \$3,000 per worker to support new USDOL RAs and more than 5,447 new apprentices have started training since October 1, 2015.

Michigan Industry Cluster Approach

The Michigan Industry Cluster Approach (MICA) creates a framework in which many employers within a single industry engage with the workforce system to identify and address talent demands efficiently through multi-company, industry-focused training programs. Regionally, the Michigan Works! network convenes employers with educators, economic development organizations, and other workforce developers to solve talent challenges. Local industry clusters are led by employers based on local needs. There are more than 60 formal employer-led collaboratives (ELCs) statewide. A number of ELCs use pre-apprenticeship and RAP training models to accelerate talent development.

Partners Drive RA Expansion

Michigan Apprenticeship Advisory Board

Established in 2021, the [Michigan Apprenticeship Advisory Board \(MAAB\)](#) is a state-level board consisting of members who are experts in the development and expansion of the RAP model from multiple industry sectors, labor organizations, secondary and postsecondary education, workforce development, state government, and the USDOL-MiOA. The MAAB provides guidance on innovation and implementation strategies for implementation teams working to expand RAP opportunities and ensure program grant performance targets and program sustainability results.

Regional Implementation Consortia

Regional Implementation Consortia (RIC) from across Michigan are responsible for local program implementation of state level innovations, primarily optimized proven practices from other regions to establish new or expand existing RAPs and apprenticeship readiness education and training.

Michigan Apprenticeship Steering Committee, Inc.

The Michigan Apprenticeship Steering Committee, Inc. (MASCI) is an advocacy group made up of professionals from education, manufacturing, construction trades, and governmental departments of Michigan. MASCI's objective is to educate Michigan's workforce and employer groups on the benefits of participation in registered apprenticeship. MASCI provides several resources for individuals to map out a career path and assist employers in the development of RAPs. A special committee of MASCI has been established to develop a broad apprenticeship communication strategy to counselors, vocational education instructors, parents, and students filling a critical need in the state.

Michigan Educators Apprenticeship and Training Association

The Michigan Educators Apprenticeship and Training Association (MEATA) is a nonprofit organization devoted to providing a forum for the professional development of secondary and postsecondary educators and other RA stakeholders involved in providing apprenticeships and work-based education. Since its founding, MEATA has been a vocal advocate for the expanded use of work-based learning as the most effective and least costly means of transferring generational knowledge from older to younger workers, while supplementing that knowledge with the latest academic discoveries and advances. The organization is probably best known for its annual Spring Conference, where apprenticeship and work-based training representatives and stakeholders from across Michigan are provided unique opportunities to network, collaborate, learn, and grow.

Veterans in Registered Apprenticeship

Michigan recognizes that veterans, National Guard, or Reserve members are prime candidates for RAP opportunities. Registered Apprenticeships in construction and manufacturing can be an excellent choice, but now, opportunities are emerging in sectors like energy, healthcare, information technology, and mobility. LEO's USDOL grant awards help support veteran RA expansion. Funding is focused on providing additional opportunities for veterans by increasing the number of Veteran Friendly Employers and the number of veterans able to use GI Bill® benefits in Registered Apprenticeship. GI Bill® benefits can provide a monthly housing allowance and stipend for books and supplies, in addition to earned registered apprenticeship wages.

Michigan State Approving Agency

The Michigan State Approving Agency (SAA) works to approve education/training facilities and related programs for veterans and other eligible dependents throughout the State of Michigan. These approvals enable the utilization of GI Bill® educational benefits (Chapters 30, 33, 35, 1606) at Michigan's educational and training facilities. Michigan has more than 700 approved educational institutions, apprenticeship training, and on-the-job training sites that offer education and training programs to military personnel, veterans, and other eligible individuals. The SAA allows veterans and other eligible dependents to access their GI Bill® benefits while training at an approved facility.



Celebrating RA Expansion

National Apprenticeship Week

Michigan's registered apprenticeship partners are leaders in National Apprenticeship Week celebrations. In 2020, partners hosted more than 45 National Apprenticeship Week events and posted 19 proclamations, including one from Governor Whitmer proclaiming the week as "Michigan Apprenticeship Week." National Apprenticeship Week is a nationwide celebration that brings together business leaders, career seekers, labor organizations, educational institutions, and other critical partners to demonstrate support and celebrate the growing use of the registered apprenticeship training model.

Innovative Expansion Resources

Braided Funding and Co-Enrollment Matrix

The Michigan Registered Apprenticeship Program [Braided Funding and Co-Enrollment Matrix](#) helps facilitate discussion on potential RAP funding scenarios to significantly increase support for Statewide Apprenticeship Expansion grant program RAP sponsors and participants. This support can help ensure their success with the RAP training model. The Matrix is located under the "Resources" tab on [Michigan.gov/Apprenticeship](#).

Michigan Registered Apprenticeship Dashboard

In January 2021, [Michigan's Registered Apprenticeship Data Dashboard](#) was launched. This dashboard provides interactive data display features to list RAPs by industries and occupations, to completion rates, numbers of active registered apprentices for Michigan and its 10 prosperity regions, and related wage records.

School to Registered Apprenticeship

There has been limited but successful use of the USDOL-OA School to Registered Apprenticeship (STRA) model in Michigan as a vehicle to connect high school students with employers and community colleges. Within this model, students move more quickly through registered apprenticeship while simultaneously earning a high school diploma and postsecondary education credits. The STRA was established via an amendment to Michigan's Single Business Tax (SBT) Act in 1999 (Public Act 184) and was repealed by 2006 Public Act 325, which took effect December 31, 2007 as part of the revamping of the SBT. Efforts are underway with local employers and others to promote the revitalization of the STRA through MiYARN efforts.

**THE MICHIGAN STATE APPRENTICESHIP
EXPANSION TEAM**



**MICHIGAN REGISTERED
APPRENTICESHIPS
BY THE NUMBERS**

Apprenticeships provide crucial classroom and on-the-job experience to help train Michigan workers for key occupations in the labor market.

While apprentices earn a credential, employers also benefit from apprenticeship programs in a variety of ways including developing a highly skilled workforce, reducing turnover rates, creating a pipeline of qualified workers, and increasing productivity.¹ This report provides an updated analysis on the state of registered apprenticeships in Michigan, building off previous reports released by the Bureau of Labor Market Information and Strategic Initiatives in 2016 and 2019. Much like the last edition of this report in 2019, Michigan has continued to see an increasing number of registered apprentices and programs, as well as an increase in the diversity of both participants and programs.

In a registered apprenticeship, apprentices earn a paycheck from the first day they work until program completion, and wages increase with skills gain over time. These programs can last anywhere from one to six years with a focus on both education and work experience. Upon completion, apprentices earn a nationally recognized credential, verifying that they are fully trained for the job. The following sections highlight a variety of resources at the statewide and national scale that help support registered apprenticeships in Michigan. This information is especially important as Michigan continues to invest more resources into registered apprenticeships across the state.

¹ Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

Registered apprenticeships are “innovative work-based learning and postsecondary earn-and-learn models that meet national standards for registration with the DOL (or federally recognized State Apprenticeships Agencies).” These standards include evidence of:

Source: U.S. Department of Labor (DOL)

1. Business involvement
2. Structured on-the-job training
3. Related instruction
4. Rewards for skill gains
5. National occupational credential

Data and Methodology

Data for this report are primarily from the Registered Apprenticeship Partners Information Management Data System (RAPIDS), managed by the Department of Labor (DOL) Office of Apprenticeship (OA). This is one of the largest databases of its kind. To achieve comparable results to what is published by the DOL, this report follows methodology which is set by the OA.

Unlike the previous edition of this report in 2019, this study does not focus on distinct time periods for analysis. It is comprehensive, using data between the 2008 and 2020 registered apprenticeship fiscal years. Typically, these fiscal years run from October through September. The most recent year of data, 2020, includes information from October 1, 2019 through September 30, 2020, resulting in data encompassing pre-pandemic and pandemic labor market conditions. For more information on how the COVID-19 pandemic has affected Michigan's labor force, please read the [September 2021 issue of Michigan's Labor Market News](#).

This study looks at employment and wage outcomes for those who have completed their program during

the 2019 fiscal year of analysis across different stages of apprenticeship in Michigan. "New" apprentices are those who have entered a registered apprenticeship program during the fiscal year. Similarly, "new" programs also must have registered during the fiscal year of analysis. An "active" apprentice is defined as those who are registered, suspended, and reinstated during the fiscal year. These conditions also hold true for "active" programs. "Completers" are any registered apprentices who completed their apprenticeship during the fiscal year of analysis. To better understand the impact of apprenticeships on Michigan's labor market, this study leverages administrative wage record data to measure the employment outcomes of registered apprentices upon completion of their program.

One methodological difference in this report compared to previous reports is how regional apprentices are defined. Previous editions labeled apprentice regions based on where they live. However, this report and the [Michigan Registered Apprenticeship Dashboard](#) define these regions based on program location to better understand how these local labor markets are impacted.

New apprentices are those who have entered a registered apprenticeship program during the fiscal year.

Active apprentices include those who are registered, suspended, and reinstated during the fiscal year.

Completers are any registered apprentices who have completed their apprenticeship during the fiscal year of analysis



Current State of Registered Apprenticeships

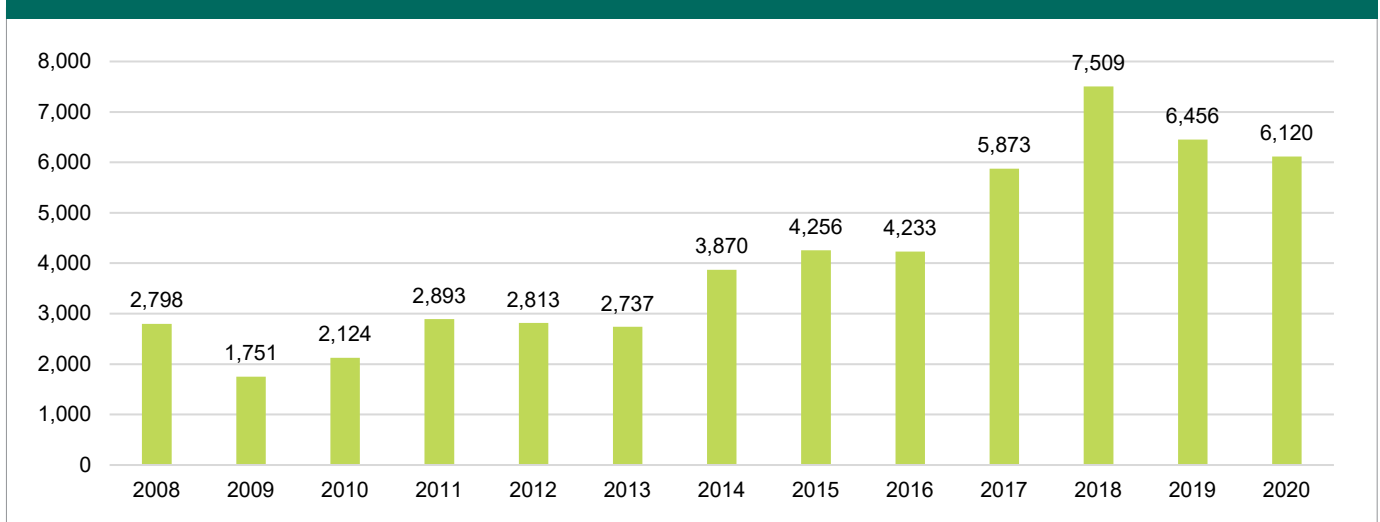
Despite the significant impact of the COVID-19 pandemic, Michigan saw a favorable number of active registered apprentices in 2020. Over the year, there were 19,130 active apprentices who were spread across more than 1,200 active programs in the state. Of these active programs, 40 were new.

Over 60 percent of active apprentices were in *Construction* and just over 20 percent were in *Manufacturing*—both traditional apprenticeship industries. *Retail trade*, *Utilities*, and *Health care and social assistance* were the next largest industry sectors, however each had less than 5 percent of active apprentices.

In 2020, there were just over 6,100 new registered apprentices in Michigan. This was down from the previous two years, where there were 7,500 in 2018 and nearly 6,500 in 2019. While there were fewer new apprentices than the previous two years, the number of new apprentices is well above numbers recorded in the early part of the last decade. During this time, new apprentices varied between 2,000 and 3,000 before seeing an uptick in 2014.

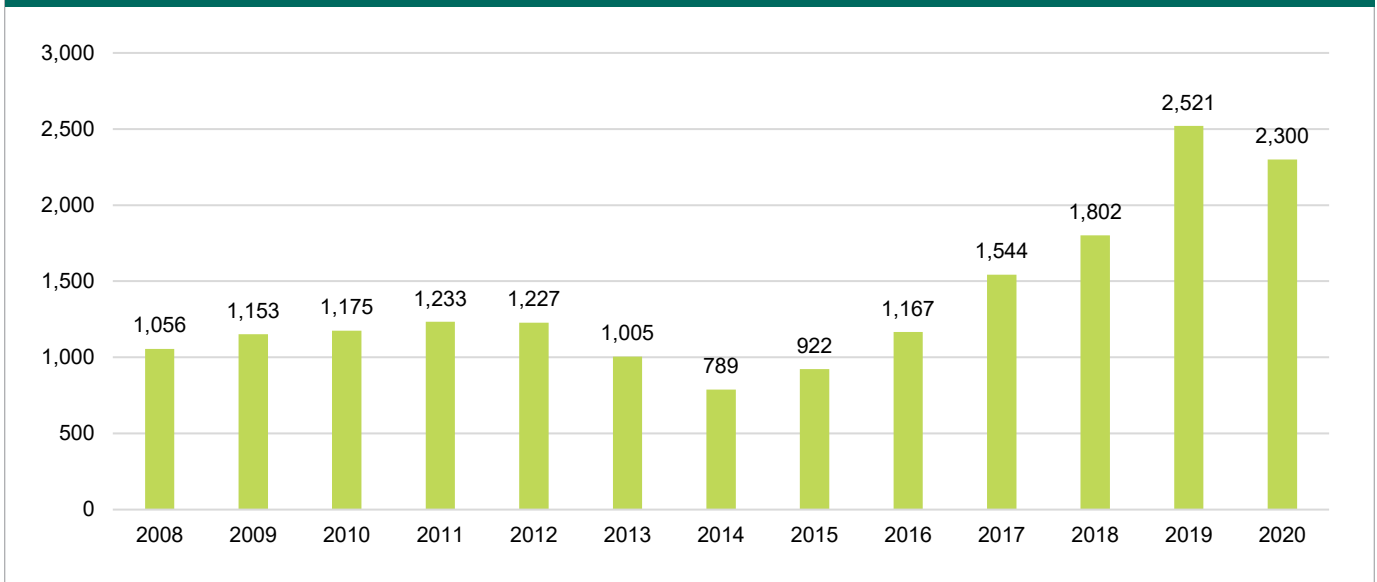
There were 2,300 registered apprenticeship completers in 2020. This was the second highest number of completers in a year since 2008, only behind 2019

FIGURE 1: NEW REGISTERED APPRENTICES IN MICHIGAN BY YEAR



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

FIGURE 2: REGISTERED APPRENTICESHIP COMPLETERS IN MICHIGAN BY YEAR



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

where there were just over 2,500 completers. The number of registered apprenticeship completers rose every year from 2014 through 2019. Before 2017, there had not been a year where there were more than 1,500 completers. Since 2017, the average number of completers per year was just over 2,000. Comparatively, from 2008 to 2016, the average number of completers measured just below 1,100 per year.

West Michigan is home to the largest share of active programs in the state, housing nearly 31 percent of programs. The Detroit Metro region had the second highest share with just under 22 percent, and Southwest Michigan was the next largest with 15.0 percent. 2020 also saw a slowing in new registered apprenticeship

programs across the state, with only 44 new programs. This was the fewest number of new programs since before 2008, and the first time since 2009 with fewer than 60 new programs in a year. From 2017 to 2019, there were an average of 106 new programs each year across the state.

When looking at Michigan from the national level in 2020, the state ranked 5th in terms of active registered apprentices behind California, South Carolina, Ohio, and Texas. Michigan ranked 7th in the number of new registered apprentices and 9th in the number of completers. Among active programs, Michigan ranked 7th nationally and was 20th in the number of new programs.



Demographics

Improving representation across various demographic groups is a key focus among those involved with the expansion of the use of the registered apprenticeship training model in Michigan. This section describes four key demographics to gauge progress and areas for improvement across the state; women, people of color, veterans and youth.

Gender

Among 2020 active registered apprentices across the state, 11.0 percent were women, or just over 2,100 apprentices. Just over one-third of women apprentices were in the traditional apprenticeship industries of *Construction* and *Manufacturing*. However, women made up a small percentage of these industries overall. Women accounted for just 3.9 percent and 6.6 percent of active apprentices in *Construction* and *Manufacturing*, respectively. *Utilities* also had a small representation of women apprentices at just 1.6 percent.

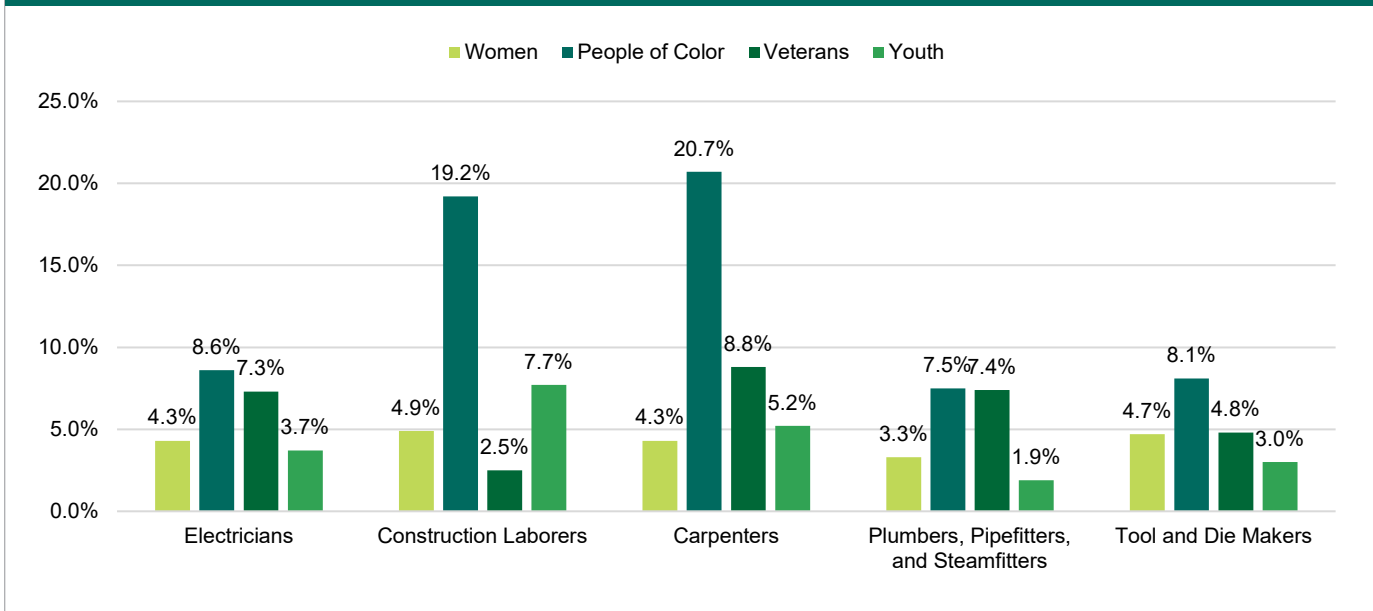
Over half (57.8 percent) of women active apprentices were comprised in the industries of *Health care and social assistance* and *Retail trade*. Women also dominated representation in these industries as well,

making up 81.5 percent and 73.2 percent, respectively. *Administrative and support and waste management and remediation services* also had a high participation of women with 27.2 percent.

Just under one-quarter of women active registered apprentices were *First-line supervisors of retail sales workers*, making up 75.5 percent of active apprentices within the occupation. Among occupations with over 100 active apprentices, women were also very well represented in *Nursing assistants* (91.5 percent), *Pharmacy technicians* (78.8 percent), and *Cooks, restaurant* (67.9 percent). 11.8 percent of active apprentices were women among *Operating engineers and other construction equipment operators*, where increased representation of women has been an intentional focus area.

Larger occupations with more than 1,000 active apprentices in Michigan had a much lower share of women compared to others in 2020. These occupations include *Construction laborers* (4.9 percent), *Carpenters* (4.3 percent), *Electricians* (4.3 percent), and *Plumbers, pipefitters, and steamfitters* (3.3 percent). Combined, these four occupations were home to 20.0 percent of all active women apprentices.

FIGURE 3: DEMOGRAPHIC SHARE AMONG ACTIVE APPRENTICES IN MICHIGAN, SELECT OCCUPATIONS



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

Race

Just under 2,400 (12.3 percent) of 2020 active apprentices were people of color (POC). Within this cohort, 83.9 percent identified as Black, 9.3 percent identified as Native American and 5.5 percent identified as Asian.

Just under two-thirds (62.1 percent) of active apprentices who are POC are in the *Construction* sector. This accounts for 12.5 percent of all active *Construction* apprentices in Michigan in 2020. Additionally, 11.1 percent of all active *Manufacturing* apprentices (another traditional sector) and 30.1 percent of active apprentices in *Retail trade* were POC. Among larger sectors, POC only made up 5.2 percent of active apprentices in *Health care and social assistance*.

Within the largest apprenticeship occupations, POC are well represented among *Carpenters* and *Construction laborers*, making up 20.7 percent and 19.2 percent, respectively. *Electricians* had a participation rate of 8.6 percent and *Plumbers, pipefitters, and steamfitters* had a rate of 7.5 percent. POC also made up a large portion of both *First-line supervisors of retail sales workers* and *Pharmacy technicians* at 31.1 percent and 28.0 percent of active apprentices, respectively.

Veteran Status

Michigan veterans are a vital group within the workforce and registered apprenticeships across the state. In 2020, veterans accounted for only 6.0 percent of active apprentices statewide. In the traditional industries of *Construction* and *Manufacturing*, veterans made up 6.4 percent and 5.3 percent, respectively. Among all veteran apprentices, 83.6 percent were in traditional apprenticeships. *Utilities* and *Administrative and support and waste management and remediation services* each had a share of veterans with 11.6 percent and 8.8 percent, respectively. There were practically zero veterans in both *Retail trade* and *Health care and social assistance*.

Nearly half of active veteran apprentices were in the occupations of *Carpenters, Plumbers, pipefitters, and steamfitters, and Electricians*. Veterans made up 8.8 percent, 7.4 percent, and 7.3 percent of these occupations, respectively. Just 2.5 percent of *Construction laborers* were veterans. The largest share of veteran active apprentices statewide was in *Security and fire alarm systems installers* (14.8 percent) and *Electrical power-line installers and repairers* (14.4 percent).



Youth Status

Due to Michigan's focus on school to registered apprenticeship, youth apprentices are defined as those between 16 and 18 years old, as compared to the 2019 report, where youth apprentices were defined as those apprentices who are 24 and younger. As such, the number of youth apprentices in this report may appear much smaller than that in the previous report.

In 2020, there were just under 800 (4.0 percent) active apprentices in Michigan between the ages of 16 and 18 years old. Three-quarters of youth apprentices are in *Construction* while making up 4.9 percent of all active apprentices in the sector. Just 2.2 percent of *Manufacturing* active apprentices were youth. Those within the youth age range were well represented in *Educational services*, accounting for 13.7 percent of active apprentices in the sector.

Within larger occupation groups, youth apprentices made up 7.7 percent and 5.2 percent of *Construction laborers* and *Carpenters*, respectively. Just 3.7 percent and 1.9 percent were in the occupations of *Electricians* and *Plumbers, pipefitters, and steamfitters*, respectively. Apprentices ages 16 to 18 also made up 14.7 percent and 7.1 percent of *Electrical and electronics repairers, commercial and industrial equipment* and *Brickmasons and blockmasons*, respectively.

Occupations

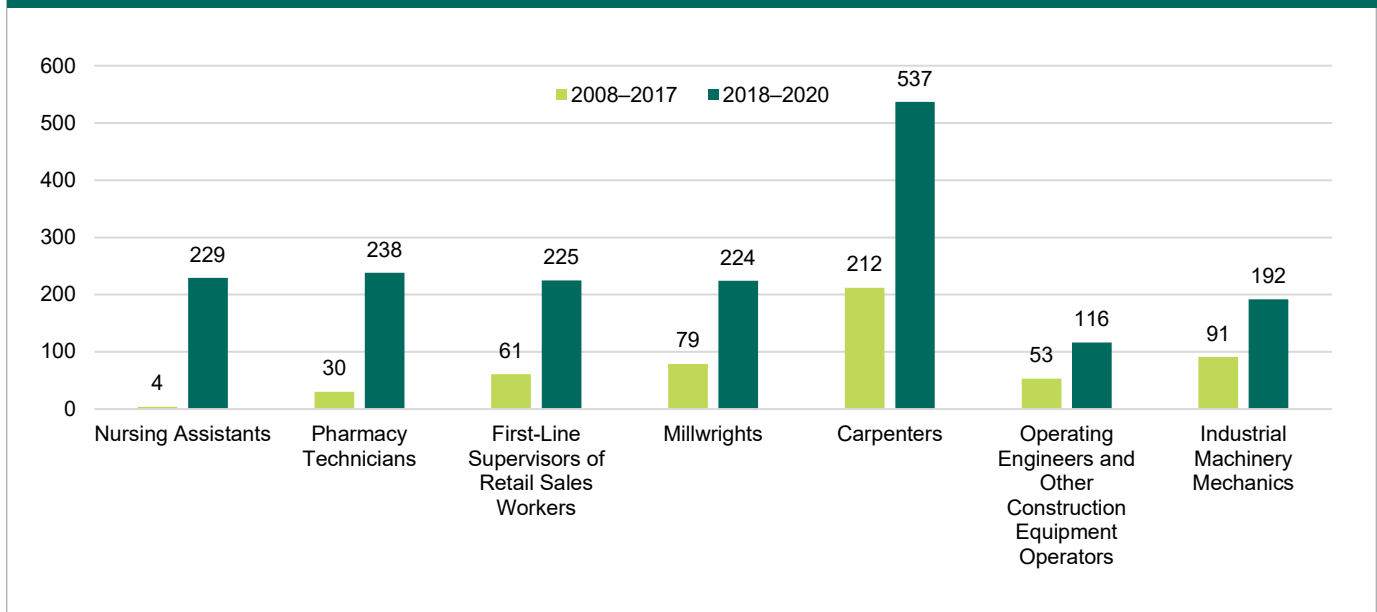
Just over half (51.0 percent) of active apprentices in Michigan are contained within four occupations. These occupations include *Electricians* (19.8 percent), *Construction laborers* (14.4 percent), *Carpenters* (8.7 percent), and *Plumbers, pipefitters, and steamfitters* (8.2 percent). These occupations also have the largest number of total new apprentices between 2008 and 2020, while *Construction laborers* have just the 12th largest number of completers in the same period.

Between 2008 and 2019, *Carpenters* averaged over 200 new registered apprentices each year. There were over 900 new apprentices in the occupation in 2020, the largest spike of any occupation across Michigan. *Millwrights* also experienced a significant increase in new apprentices in 2020 and was among the top five occupations in 2020 for new apprentices. Between 2008 and 2019, there were just under 100 new apprentices a year in the occupation compared to more than 400 in 2020.

There have been several other occupations which have seen significant growth in the number of new apprentices in the last few years. In fact, 86 occupations experienced growth in the average number of new apprentices in 2018–2020 compared to 2008–2017. Just 39 occupations experience negative growth. The growing number of new apprentices across this many occupations helps to signify not just growth in apprenticeship participation, but an increase in the diversity of apprenticeship occupations as well.

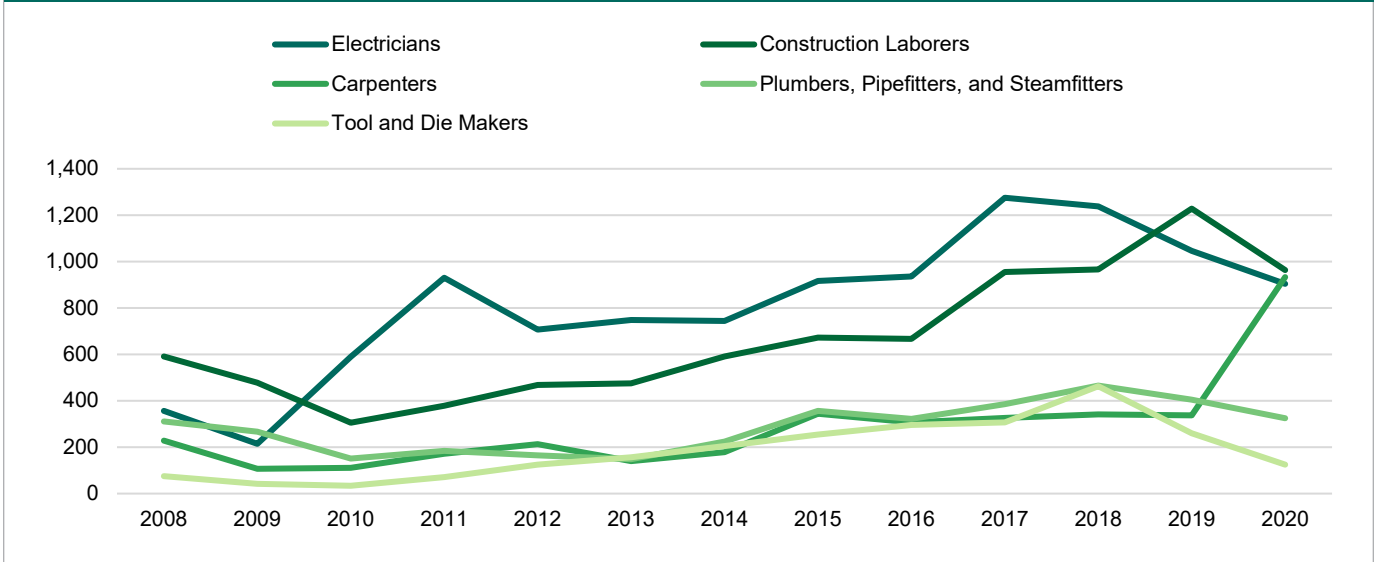
Figure 4 displays the change in the average number of new registered apprentices between the two time periods for a few of these occupations which saw the most growth. Many occupations included have just recently seen an uptick in the number of new apprentices after having very few in previous years. These occupations also include those in nontraditional fields as well. *Nursing assistants* observed a considerable increase, going from almost no new apprentices each year from 2008 to 2017 to over 200 apprentices each year between 2018 and 2020.

FIGURE 4: CHANGE IN THE AVERAGE NUMBER OF NEW REGISTERED APPRENTICES IN MICHIGAN, SELECT OCCUPATIONS



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

FIGURE 5: NEW REGISTERED APPRENTICES IN MICHIGAN BY OCCUPATION



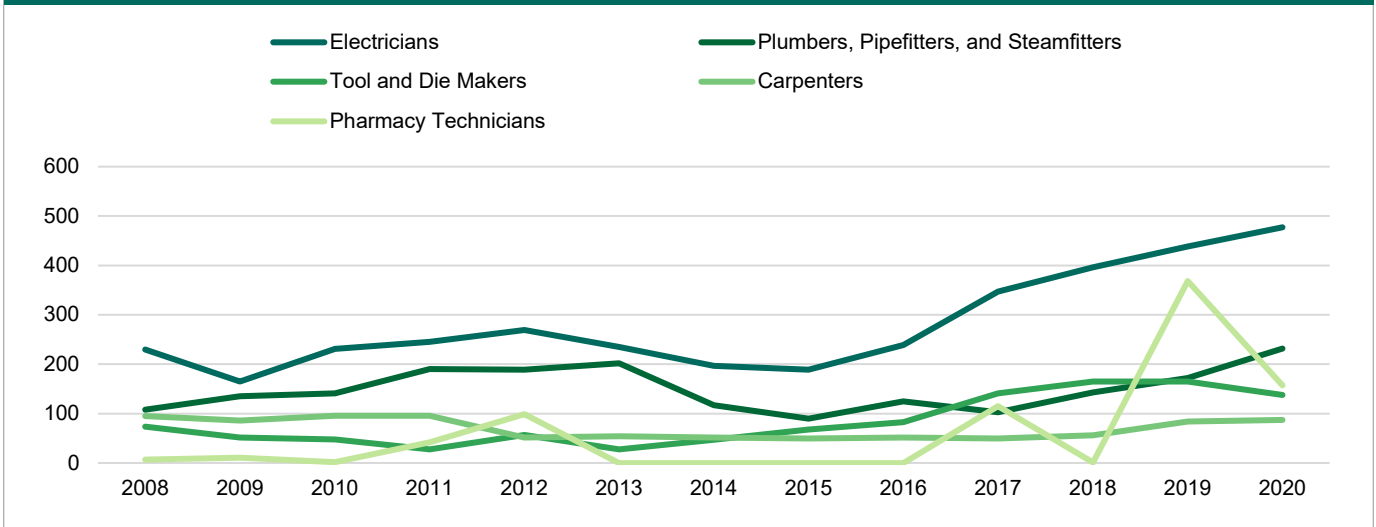
Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

The largest number of registered apprenticeship completers between 2008 and 2020 resided in *Electricians* (20.4 percent) and *Plumbers, pipefitters, and steamfitters* (10.9 percent). Among completers, the occupations during this period were more diverse as the third largest occupation, *Tool and die makers*, only accounted for 6.1 percent. *Construction laborers*, while one of the largest occupations among new and active apprentices, ranks 12th in terms of completers over the period at just 2.4

percent. When analyzing completers, it is also important to note the lag in data behind that of new apprentices. It is expected that as the number of new apprentices increases, the number of completers will also increase as they are afforded time to complete their apprenticeship.

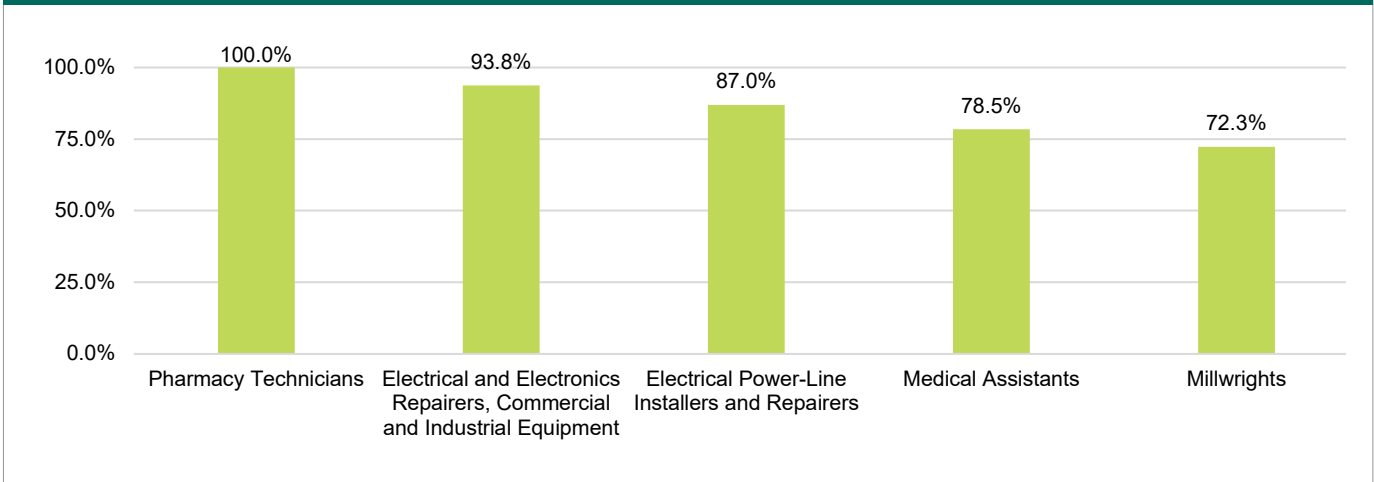
Figures 5 and 6 show the change in the number of new apprentices and completers statewide for the top five occupations in each group.

FIGURE 6: REGISTERED APPRENTICESHIP COMPLETERS IN MICHIGAN BY OCCUPATION



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

FIGURE 7: TOP FIVE OCCUPATIONS WITH THE HIGHEST COMPLETION RATES IN MICHIGAN



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

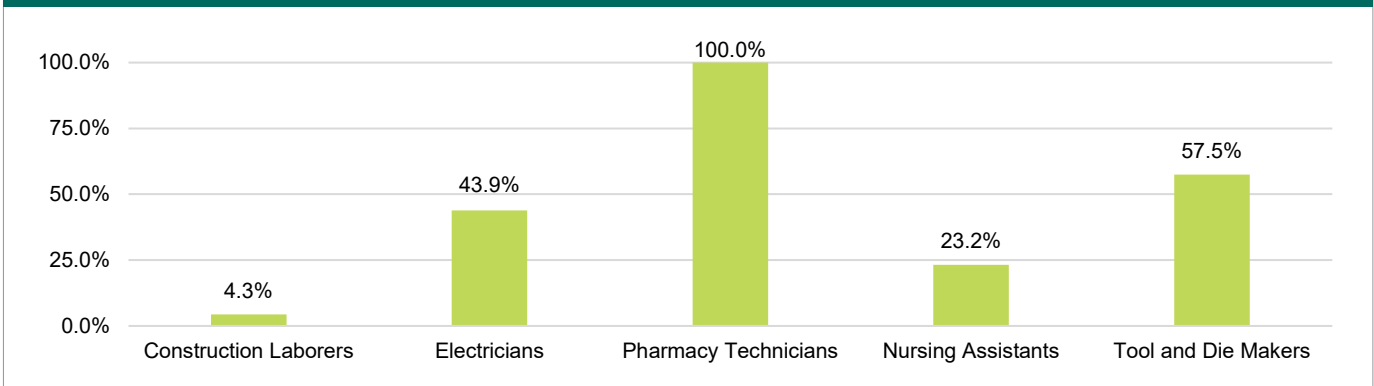
Completion Rates

While looking at the number of completers is an important metric in gauging the progress of the use of the registered apprenticeship training model in Michigan, it is also important to look at occupational completion rates. Completion rates are measured as the percentage of new registered apprentices who complete their program within their expected time frame. This expected time frame is the length of the program with a 50.0 percent extension. For example, those in a four-year program are given six years to complete. Additionally, these rates are measured taking the most recent cohort of completers for which data is available, this being 2020 completers. Meaning, the earliest year

a new apprentice would have started in a four-year program would have been 2014.

For all occupations, the completion rate was 41.0 percent. Among occupations with 10 or more completers, Pharmacy technicians had the highest completion rate at 100.0 percent among nearly 400 apprentices. As seen in Figure 8, *Electrical and electronics repairers, commercial and industrial equipment* had the second highest at 93.8 percent, followed by *Electrical power-line installers and repairers* at 87.0 percent. Among larger occupations, *Construction laborers* had a completion rate of just 4.3 percent in the most recent cohort and *Electricians* was at 43.9 percent.

FIGURE 8: COMPLETION RATES FOR TOP OCCUPATIONS IN MICHIGAN



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

Employment Outcomes

Administrative wage record data helps paint a picture of post-apprenticeship outcomes among registered apprenticeship completers. This allows for analysis on employment one year after program completion as well as wages earned among those employed one year after completion (this is comparable to a starting wage for any non-apprenticed occupation).

For this report, 2019 registered apprenticeship completers were analyzed to see if they were earning wages one year after completion. Occupations with fewer than 10 completers employed were suppressed. Because of this, data on occupations such as *Carpenters*, *Medical assistants*, and *Welders, cutters, solderers, and brazers* were not available due to the insufficient number of employed. There were 19 occupations which reached the criteria to

remain unsuppressed, compared to just 13 in the 2019 report. Figure 9 shows the one-year-after wages and employment percentages for the top 10 occupations in terms of number of completers which were earning wages one year after completion.

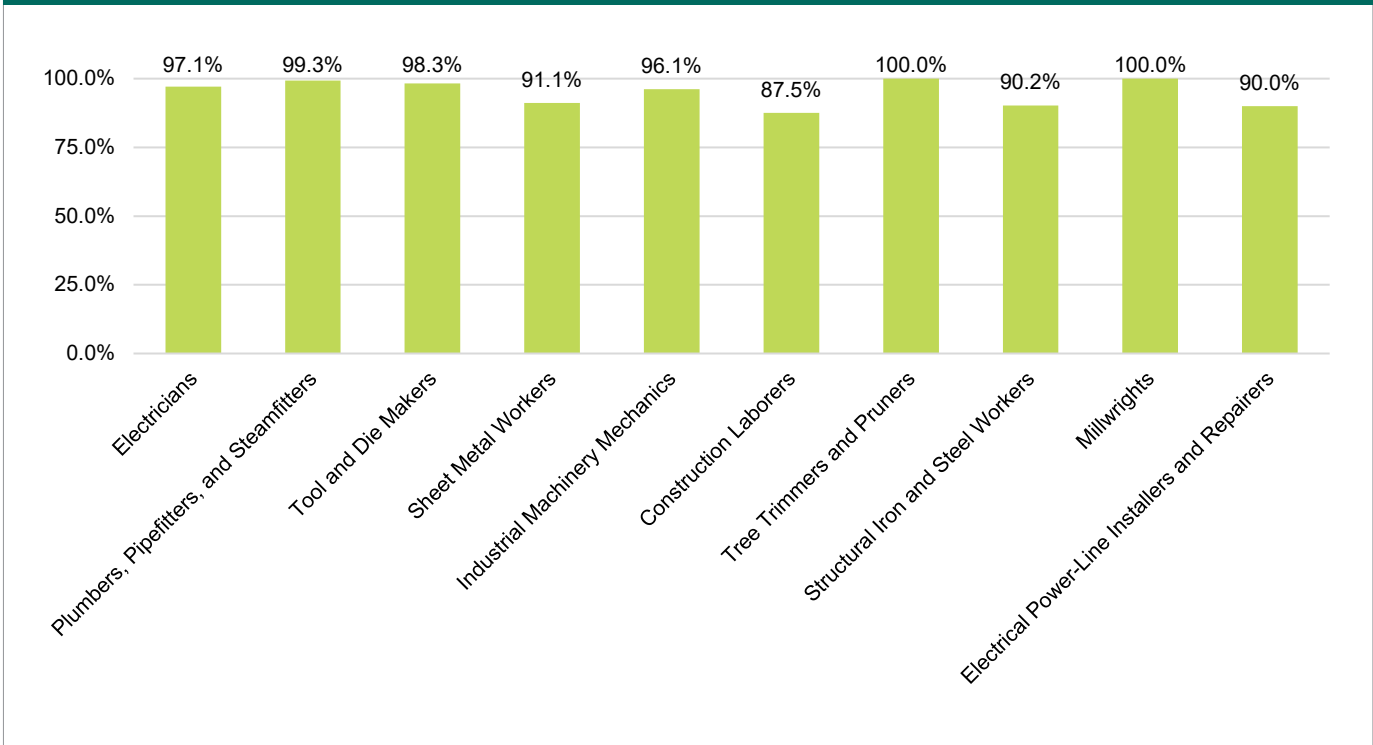
For 2019 completers, the median hourly one-year-after wage for all occupations was \$32.22. Comparatively, the 2020 overall 25th percentile hourly wage for all occupations in Michigan (a proxy for starting wages across all occupations in Michigan) was just \$13.60, nearly \$20.00 per hour less. Of the 19 occupations analyzed, 18 had a median hourly one-year-after wage greater than the 25th percentile hourly wage. *Electrical and electronics repairers, commercial and industrial equipment* completers had a median hourly wage of \$28.22, whereas the 25th percentile wage for the

FIGURE 9: EARNINGS ONE YEAR AFTER COMPLETING AN APPRENTICESHIP, SELECT OCCUPATIONS, MICHIGAN



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor; Michigan Department of Labor and Economic Opportunity; 2020 Occupational Employment and Wage Statistics (OEWS), Bureau of Labor Market Information and Strategic Initiatives, Michigan Department of Technology, Management & Budget

FIGURE 10: PERCENT EMPLOYED ONE YEAR AFTER COMPLETING AN APPRENTICESHIP, SELECT OCCUPATIONS, MICHIGAN



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor; Michigan Department of Labor and Economic Opportunity

occupation was \$29.89. The other 18 occupations all had a median hourly one-year-after wage greater than that was at least \$2.16 more than the 25th percentile hourly wage. For 11 of these occupations, the one-year-after median wage was at least \$10.00 more than the 25th percentile hourly wage.

Among top occupations, those who completed an apprenticeship in 2019 as *Electricians* earned a median hourly one-year-after wage of \$34.91. This was well over the 25th percentile hourly wage for the occupation of \$21.39. Other top occupations where wages were significantly higher than the 25th percentile wage included *Plumbers, pipefitters, and steamfitters* (\$35.28), *Sheet metal workers* (\$41.60), *Industrial machinery mechanics* (\$33.81), and *Electrical power-line installers and repairers* (\$70.23).

Along with these one-year-after wages, employment percentages allow for the analysis of how many program completers were earning wages one year after completing. Overall, 2019 completers had an employment percentage of 95.9 percent. Of the 19 occupations with publishable data, only two (*Construction laborers* and *Heavy and tractor-trailer truck drivers*) had a rate below 90 percent, with both being just below that threshold. Furthermore, five of these occupations had an employment percentage of 100.0 percent. These occupations included *Tree trimmers and pruners*; *Millwrights*; *Machinists*; *Electrical and electronics repairers, commercial and industrial equipment*; and *Heating, air conditioning, and refrigeration mechanics and installers*.

Traditional and Nontraditional Industries

Apprenticeship industries can be broken down into both traditional and nontraditional industries. Traditional industries include two industries which make up most apprentices in Michigan, *Construction* and *Manufacturing*. Nontraditional industries are defined by all other industries outside of traditional industries including, but not limited to, *Retail trade*, *Utilities*, and *Health care and social assistance*.

Traditional

In 2020, there were just over 15,600 active traditional registered apprentices. This accounted for nearly 82 percent of all apprentices with nearly three times as many active apprentices in *Construction* in 2020 than in *Manufacturing*. In total, among all active apprentices, *Construction* accounted for 61.5 percent while *Manufacturing* was responsible for 20.2 percent of active apprentices.

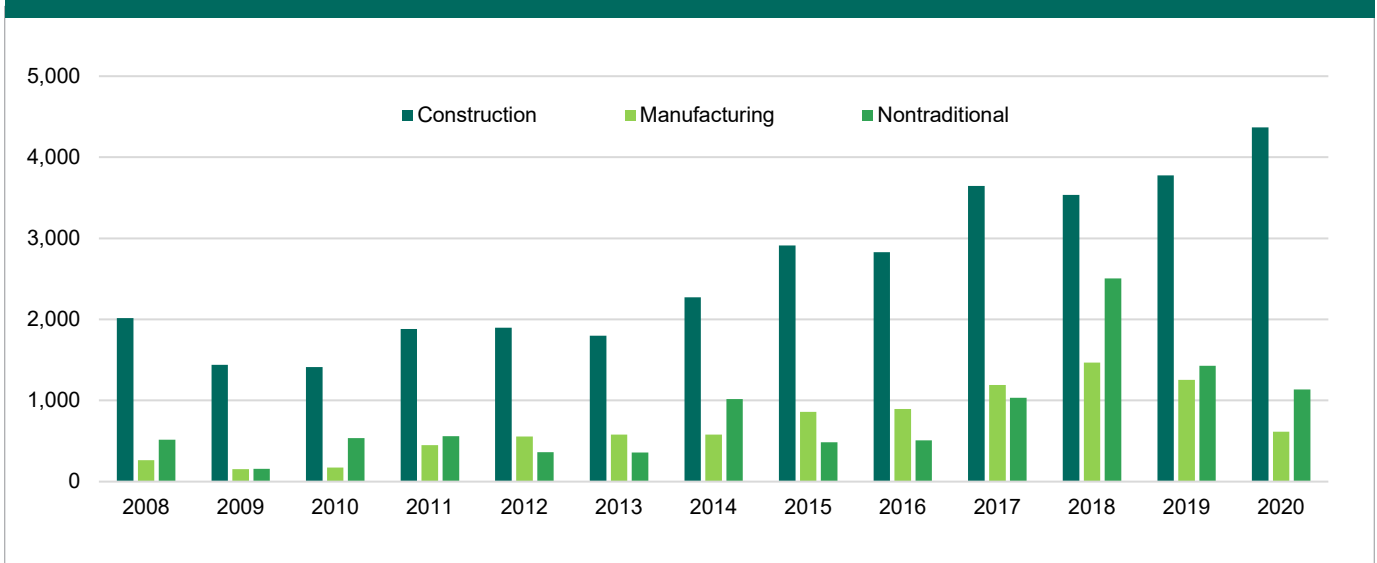
For new registered apprentices, those in the traditional industries accounted for 80.2 percent of all new registered apprentices between 2008 and 2020. *Construction* accounted for 63.2 percent of all new

registered apprentices during this period and 16.9 percent were in *Manufacturing*. In 2020, traditional apprentices made up 81.5 percent of all new registered apprentices over the year. This was an increase from the previous two years which saw a share of 66.6 percent of new apprentices in 2018 and 77.9 percent in 2019.

Among all new apprentices in 2020, 71.4 percent were in *Construction* and 10.1 percent were in *Manufacturing*. The share of new apprentices in *Construction* was the highest mark since 2009 when 82.3 percent of new apprentices were in the industry. *Manufacturing* meanwhile had its lowest share since 2010 when just 8.2 percent were in the industry. From 2015 to 2019, the share of all new apprentices during that period was 20.0 percent.

Traditional apprentices are also responsible for most apprenticeship completers. From 2008 to 2020, there were a total of 17,900 completers. Those in *Construction* (53.0 percent) and *Manufacturing* (23.6 percent) combined to account for just over three-quarters of all completers. The past two years, however, has seen a reduction in the share of completers.

FIGURE 11: NEW REGISTERED APPRENTICES BY YEAR AND INDUSTRY, MICHIGAN



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor



2019 saw just 64.8 percent of completers in traditional apprenticeships while 2020 was at 71.2 percent. From 2008 to 2018, this share was 79.9 percent.

A dip in the share of *Construction* completers is responsible for the overall decline in the share of traditional apprenticeship completers the last two years. From 2008 to 2018, 57.0 percent of all completers were in the industry. In 2019, this share was 40.3 percent, and it was 43.9 percent in 2020. There was a rise in the share of completers in *Manufacturing* in the 2008–2018 period (22.8 percent) compared with 2019 (24.5 percent) and 2020 (27.3 percent).

Nontraditional

There were just under 3,500 nontraditional active registered apprentices in 2020 in Michigan. This accounted for 18.2 percent of all active apprentices across the state. Just over two-thirds (68.1 percent) of nontraditional apprentices were in the industries of *Retail trade* (26.0 percent), *Utilities* (22.7 percent), and *Health care and social assistance* (19.4 percent). *Administrative and support and waste management and remediation services* (9.2 percent), *Public administration* (5.4 percent), and *Educational services* (5.2 percent) were the only other industries which made up greater than 5 percent of all nontraditional active apprentices.

A few nontraditional sectors have seen significant jumps in the number of new registered apprentices. *Retail trade* welcomed nearly 700 new apprentices in 2014 and another 1,000 in 2018. Outside of the years 2014 and 2018, *Retail trade* had an average number of 65 new apprentices per year between 2008 and 2020. *Utilities* averaged just under 200 new apprentices each year from 2008 to 2020 but had more than 600 new apprentices join the sector in 2017.

Health care and social assistance averaged close to zero new apprentices each year between 2008 and 2017. However, since 2018, has averaged more than 400 each year. This trend was also followed closely in *Transportation and warehousing*. Between 2008 and 2017 the sector averaged fewer than 50 new apprentices each year. This has increased to more than 100 each year since 2018.

Just under 60 percent of all nontraditional apprenticeship completers between 2008 and 2020 were in the industry sectors of *Utilities* (30.2 percent) and *Retail trade* (27.5 percent). *Educational services* was third with a share of 9.8 percent of nontraditional apprenticeship completers during the period. In 2020, *Health care and social assistance* had the third highest share of completers among nontraditional industries at 19.6 percent.

Regional Apprentices and Programs

Regional apprentice locations are determined by program location. In previous reports, regional apprentice locations were determined by where the apprentice lived. This section will dive into the make-up of registered apprentices across the 10 prosperity regions in Michigan based on the program location.

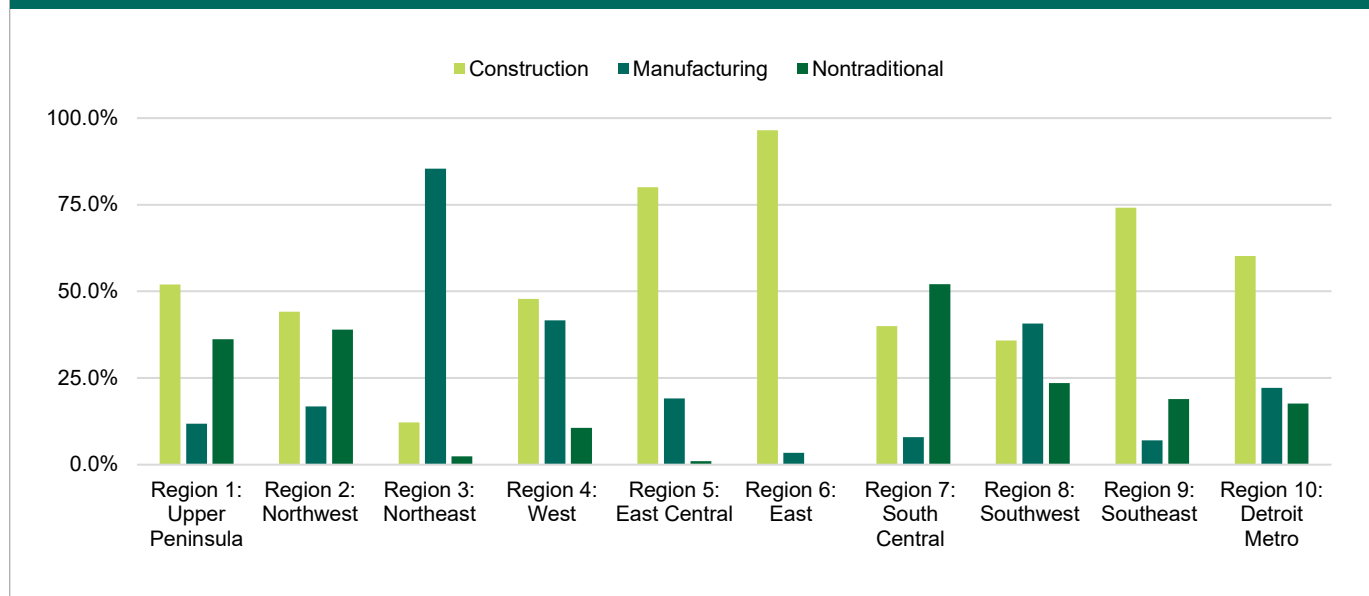
There were over 19,100 active registered apprentices in Michigan in 2020. The Detroit Metro region is home to 42.2 percent of these active apprentices. This is followed by East Michigan (15.6 percent), West Michigan (13.3 percent), and South Central Michigan (11.1 percent). Together, the Upper Peninsula, Northwest Michigan, and Northeast Michigan only have 2.7 percent of active apprentices in the state.

Michigan had over 1,200 active registered apprenticeship programs in 2020. While there were the most active apprentices in the Detroit Metro region, West Michigan had the most active programs in the state with just under 400 (30.6 percent). Detroit Metro (21.9 percent) had the second most followed by Southeast Michigan (15.0 percent).

Among industries, seven of 10 prosperity regions in Michigan had the largest share of apprentices in Construction. Notably, 96.5 percent of active apprentices in East Michigan were in the sector. The next highest share was in East Central Michigan with 80.0 percent. Northeast Michigan had an overwhelming majority of Manufacturing apprentices with 85.4 percent, albeit with less than 50 total active apprentices in the region. The sector also slightly edged out Construction in Southwest Michigan with 40.7 percent. Nontraditional industries made up most apprentices in only South Central Michigan with 52.1 percent.

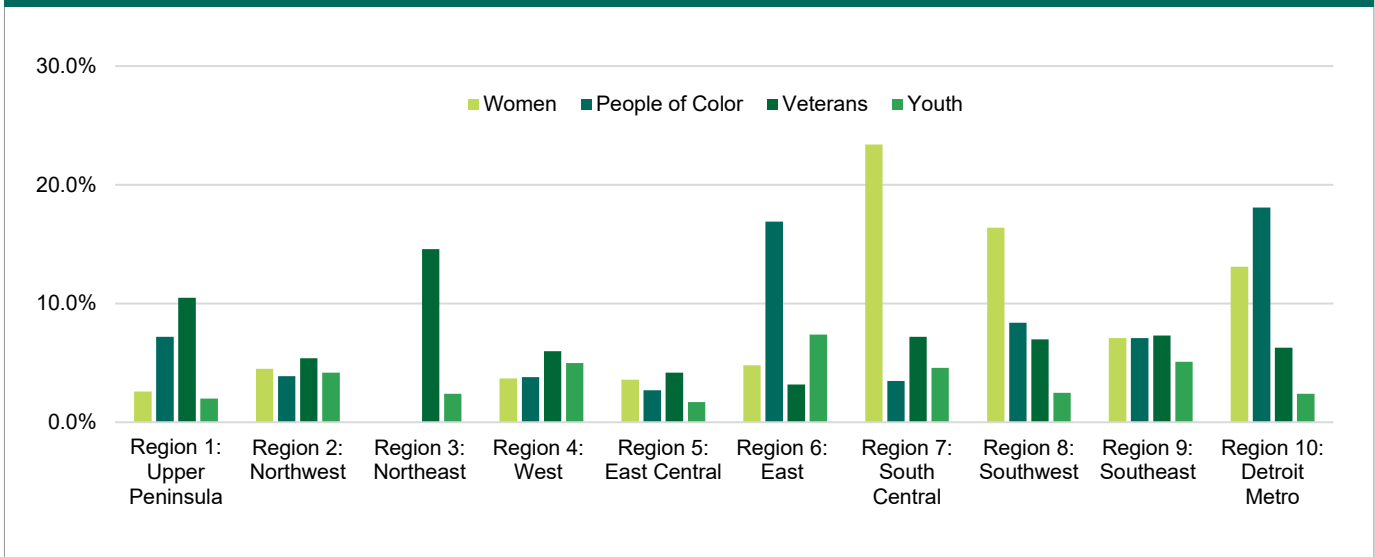
Among occupations well represented in the largest apprenticeship regions, the Detroit Metro had its largest representation among *Carpenters* (19.3 percent) and *Electricians* (16.5 percent). East Michigan saw *Construction laborers* make up most of their apprentices at 85.1 percent. The region was also home to 92.2 percent of all *Construction laborers* statewide. In West Michigan, the occupations of *Electricians* (38.1 percent) and *Tool and die makers* (12.1 percent) combined to make up just over half of all active apprentices.

FIGURE 12: ACTIVE REGISTERED APPRENTICES BY INDUSTRY, PROSPERITY REGIONS



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

FIGURE 13: ACTIVE REGISTERED APPRENTICES BY INDUSTRY, PROSPERITY REGIONS



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

Some regions of Michigan had greater representation of various demographic groups among active apprentices compared to that of the state. South Central Michigan (23.4 percent), Southwest Michigan (16.4 percent), and Detroit Metro (13.1 percent) each had a greater representation of women than Michigan (11.0 percent). Among people of color, both Detroit Metro (18.1 percent) and East Michigan (16.9 percent) had a greater share than the state (12.3 percent). Although the number of active apprentices in the Upper Peninsula and Northeast Michigan were the fewest of any regions, they each had a large share of veterans at 10.5 percent and 14.6 percent, respectively. Among youth apprentices between the ages of 16 and 18, East Michigan had the largest share of any region at 7.4 percent.

Just under 50 new registered apprenticeship programs commenced in 2020 across the state. These programs were largely contained to the regions of West Michigan (27.3 percent), Southwest Michigan (25.0 percent), Detroit Metro (20.5 percent), and Southeast Michigan (13.6 percent). Of these new programs, 68.2 percent were in traditional industries.

With these new programs, Michigan welcomed more than 6,100 new registered apprentices statewide. Detroit Metro had the largest cohort of new apprentices with a share of 45.9 percent. The next largest were

in East Michigan and West Michigan with a share of 16.3 percent and 11.1 percent, respectively. In total, 81.5 percent of all new apprentices statewide were in traditional industries. However, some regions displayed a larger share of nontraditional new apprentices. These regions included Northwest Michigan (56.2 percent), South Central Michigan (44.7 percent), and Southwest Michigan (41.1 percent).

Of the 2,300 registered apprenticeship completers in 2020, 46.6 percent were in the Detroit Metro region. West Michigan had the second largest share with 17.8 percent followed by South Central at 12.3 percent. At the industry level, West Michigan had a share of completers in *Manufacturing* of 46.6 percent. Southwest Michigan also had a high share in the sector at 46.2 percent. East Michigan and East Central Michigan had a share of Construction completers of 83.0 percent and 81.1 percent, respectively. More than half (61.6 percent) of South Central's apprenticeship completers were in nontraditional industries.



Conclusion

Registered apprenticeships in Michigan have been, and still are a crucial component when it comes to training the labor force skills for critical occupations in Michigan. There has been a heavy investment into these apprenticeship programs in Michigan at both the state and national level. With these investments, there has been a noticeable bump in the number of new and active registered apprentices across the state. Despite the COVID-19 pandemic, there were more than 19,100 active registered apprentices in Michigan in 2020. Among new registered apprentices, there were more than 6,100 statewide beginning in 2020. This was the third largest cohort of new apprentices since 2008, trailing only 2018 and 2019.

There has also been a push to increase the diversification of both registered apprenticeship programs and the people who benefit from the training model. From 2008 to 2016, nontraditional industries claimed just 16.4 percent of new registered apprentices. This share has increased to 23.5 percent from 2017 to 2020. Occupations such as Nursing assistants, Pharmacy technicians, and First-line supervisors

of retail sales workers have all seen significant increases in the number of new apprentices in the last three years. As shown in this report, among demographics, the share of new apprentices of both women and people of color have also increased in recent years.

Lastly, apprenticeships have shown to produce favorable employment outcomes for those who complete a program. On top of continued wage progression, those who complete a registered apprenticeship program earn significantly more than comparable wages for all who work in the occupation as well as have extremely high employment percentages. In Michigan, registered apprenticeships continue to be a critical training tool for both employers and those who are looking for a career pathway to good and promising jobs.

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