



**REGISTERED**

**APPRENTICESHIPS**

**IN MICHIGAN**

# REGISTERED APPRENTICESHIPS IN MICHIGAN

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## ABOUT THIS REPORT

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This report is the product of a partnership between the Michigan Bureau of Labor Market Information and Strategic Initiatives and the Michigan Department of Labor and Economic Opportunity. It is designed to examine current and historical registered apprenticeship numbers and characteristics across the state. This report details demographic, occupation, wage, industry, and program information, and builds and expands upon previous reports published by the Bureau of Labor Market Information and Strategic Initiatives in 2016, 2019, and 2021.

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## Executive Summary

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**There were just under 18,600 active registered apprentices in Michigan in 2021.** Of these, 81.9 percent were in the traditional apprenticeship industries of *Construction* and *Manufacturing*. *Health care and social assistance* was the largest nontraditional industry with a share of 5.4 percent.

**Michigan had its largest registered apprenticeship completer cohort on record.** In 2021, there were more than 2,600 completers across the state. This was about 100 more completers than what was observed in 2019 and the third straight year with more than 2,000 completers.

**Increasing participation among underrepresented demographic groups is a key focus in Michigan.** In 2021, 16.7 percent of new apprentices were women. This was the second largest share on record. Furthermore, 13.4 percent of new apprentices were people of color. This was also their second largest share over the period.

**Nontraditional apprentices have increased significantly in recent years.** From 2008 to 2017, just 16.6 percent of new apprentices were in nontraditional apprenticeships. Since 2018, 25.2 percent of new apprentices were in these nontraditional programs. This was aided by the emergence of *Health care and social assistance*.

**Registered apprenticeship completers earn favorable employment outcomes upon completion.** Among 2020 completers, the median hourly one-year-after wage was \$33.69, and 89.2 percent were employed a year after completing their apprenticeship program.

**Six of Michigan's 10 prosperity regions had over 1,000 active apprentices in 2021.** The Detroit Metro region had the most, with nearly 7,700. This was followed by East Michigan (2,800) and West Michigan (2,400). South Central Michigan had 2,300 active apprentices while also having a majority share within nontraditional industries.



# Registered apprenticeship continues to play a crucial role in providing a path toward high-paying careers for Michiganders and creating a pipeline of new talent for employers.

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As set out by the U.S. Department of Labor Office of Apprenticeship, apprentices earn a credential while employers also benefit from the development of a highly skilled workforce, a reduction in turnover rates, and increased productivity.

Michigan has continued to invest heavily in the support and expansion of registered apprenticeship in the state. For more information on these efforts, please see [last year's edition of this report](#). By definition, a registered apprentice earns a paycheck from the first day of work until program completion. These wages increase as skills are gained. Registered apprenticeship programs can last anywhere from one to six years and focus on garnering both educational and on-the-job experience. Apprentices earn a

nationally recognized credential verifying they are fully trained for the job upon completion.

This report will provide an updated analysis of registered apprenticeship in Michigan. This is the fourth edition of this report produced by the Michigan Bureau of Labor Market Information and Strategic Initiatives, with previous releases in 2016, 2019, and 2021. Along with the 2021 report, this study examines some of the impacts the COVID-19 pandemic has had on registered apprenticeship in Michigan. Despite the pandemic, Michigan has continued to see a favorable number of registered apprentices, as well as thousands of new apprentices. In 2021, the state also saw a record number of apprenticeship completers.

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

Source: U.S. Department of Labor

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

# Data and Methodology

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Data for registered apprenticeship in Michigan is provided by the Registered Apprenticeship Partners Information Management Data System (RAPIDS), managed by the U.S. Department of Labor Office of Apprenticeship. This is one of the largest databases of its kind. This report follows methodology set by the Office of Apprenticeship to achieve comparable results to what is published by the U.S. Department of Labor.

Administrative wage record data are also used for determining employment outcomes of registered apprenticeship completers. These data allow for analysis on employment one year after program completion and wages that are earned among those who are employed. This report summarizes these outcomes by various fields such as occupations, industries, and demographics. To protect confidentiality, fields with fewer than 10 observations are suppressed. The analysis in this report focuses on those who have completed their program during the 2020 registered apprenticeship fiscal year.

Fiscal years for registered apprenticeship programs typically run from the beginning of October through the end of September. The most recent year of data,

2021, includes information from October 1, 2020 through September 30, 2021. This year of data is the first full apprenticeship fiscal year which fully encompasses the impacts of the COVID-19 pandemic, as well as recovery. This study will observe registered apprenticeship in Michigan since 2008, the first year that data are available.

This study references various terminology such as active apprentices, new apprentices, and apprenticeship completers. As stated previously, methodology for determining these categories is set by the Office of Apprenticeship. “Active” apprentices are defined as apprentices who are either registered, suspended, or reinstated. These conditions also hold for “active” programs. “New” apprentices must have entered a registered apprenticeship during the fiscal year of analysis. “New” programs also must meet this condition. “Completers” are registered apprentices who finished their apprenticeship during the fiscal year. Regional apprentices throughout this report are based on program location and use Michigan’s 10 prosperity regions. The 2021 report also used this methodology, whereas prior editions based regional apprentices on where they live.

**New apprentices** have entered a registered apprenticeship program during the fiscal year.

**Active apprentices** are registered, suspended, or reinstated during the fiscal year.

**Completers** are registered apprentices who have completed their apprenticeship during the fiscal year.

# Current State of Registered Apprenticeships

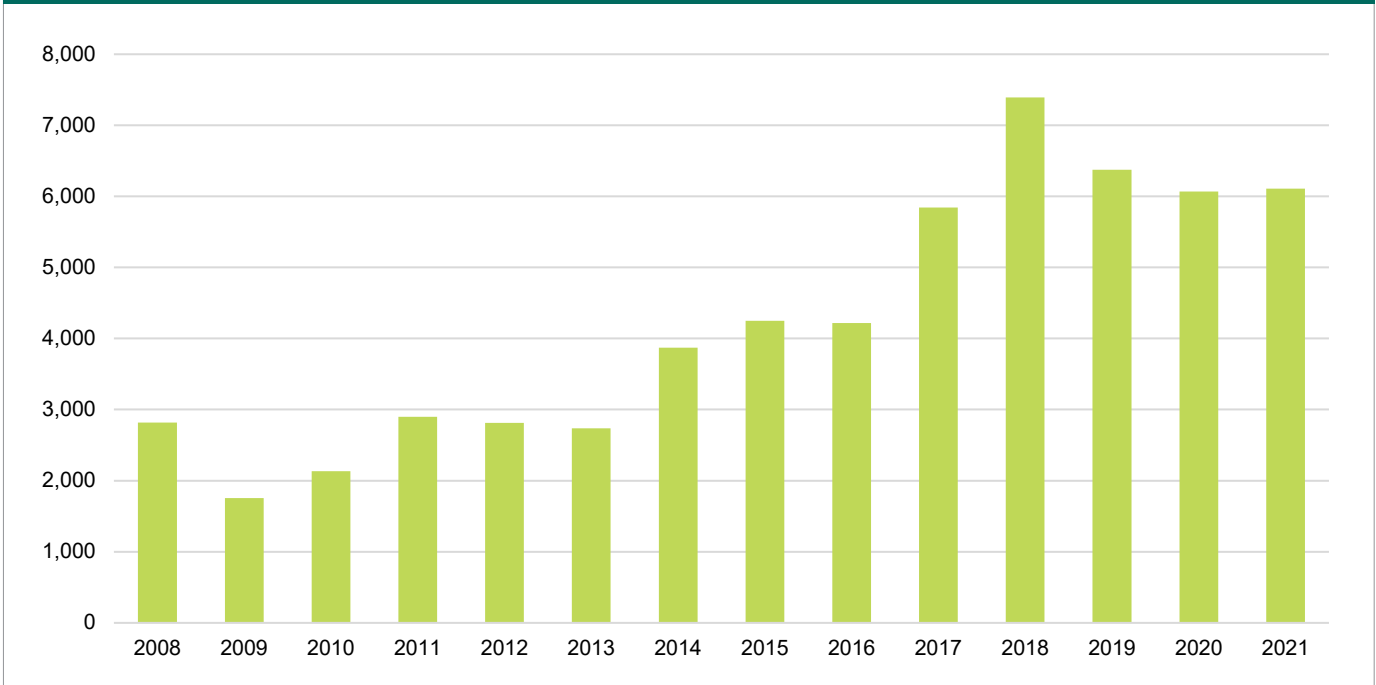
Like other workforce indicators across both the state and nation, registered apprenticeships in Michigan were impacted by the COVID-19 pandemic. In 2021, Michigan reported just under 18,600 active registered apprentices in Michigan across more than 1,200 active registered apprenticeship programs. Compared to the report published in November 2021, the number of active registered apprentices across the state has decreased by about 500.

Traditional apprenticeships in *Construction* and *Manufacturing* accounted for 81.9 percent of active apprentices in Michigan in 2021. *Construction* held the majority share of all active apprentices at 63.8 percent. *Health care and social assistance* was the only nontraditional industry with more than 1,000 active apprentices and accounted for 5.4 percent of total active apprentices across the state. This was followed by *Utilities* and *Retail trade* which each had just under 600 active apprentices and had a share of 3.2 percent

and 3.0 percent of total active apprentices, respectively. Among active registered apprenticeship programs, a similar trend is shown with the traditional industries making up the majority of programs. *Manufacturing* made up just over half (52.4 percent) of all active programs and *Construction* followed with 32.0 percent. *Health care and social assistance* had the third most with 2.2 percent.

There were just over 6,100 new registered apprentices in Michigan in 2021. The number was consistent with what was observed in 2020 but falls behind reported values in both 2018 and 2019. However, as seen in Figure 1, 2021 new apprentices significantly outnumber the new entrants prior to 2017. This can be explained by an increase in funding for registered apprenticeship in Michigan in 2016. It is also important to note that even during the COVID-19 pandemic, Michigan welcomed a substantial number of new apprentices in both 2020 and 2021.

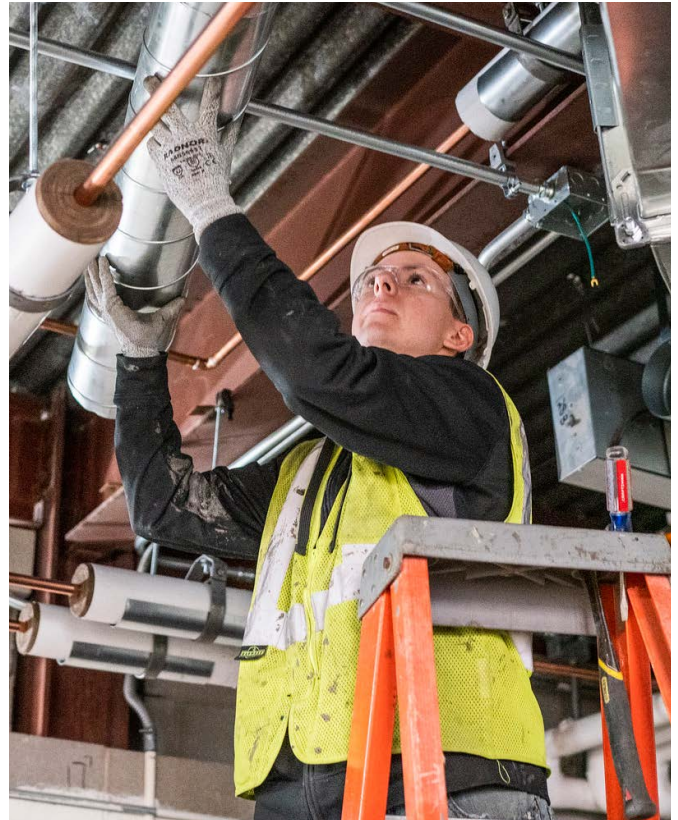
FIGURE 1: NEW REGISTERED APPRENTICES IN MICHIGAN BY YEAR



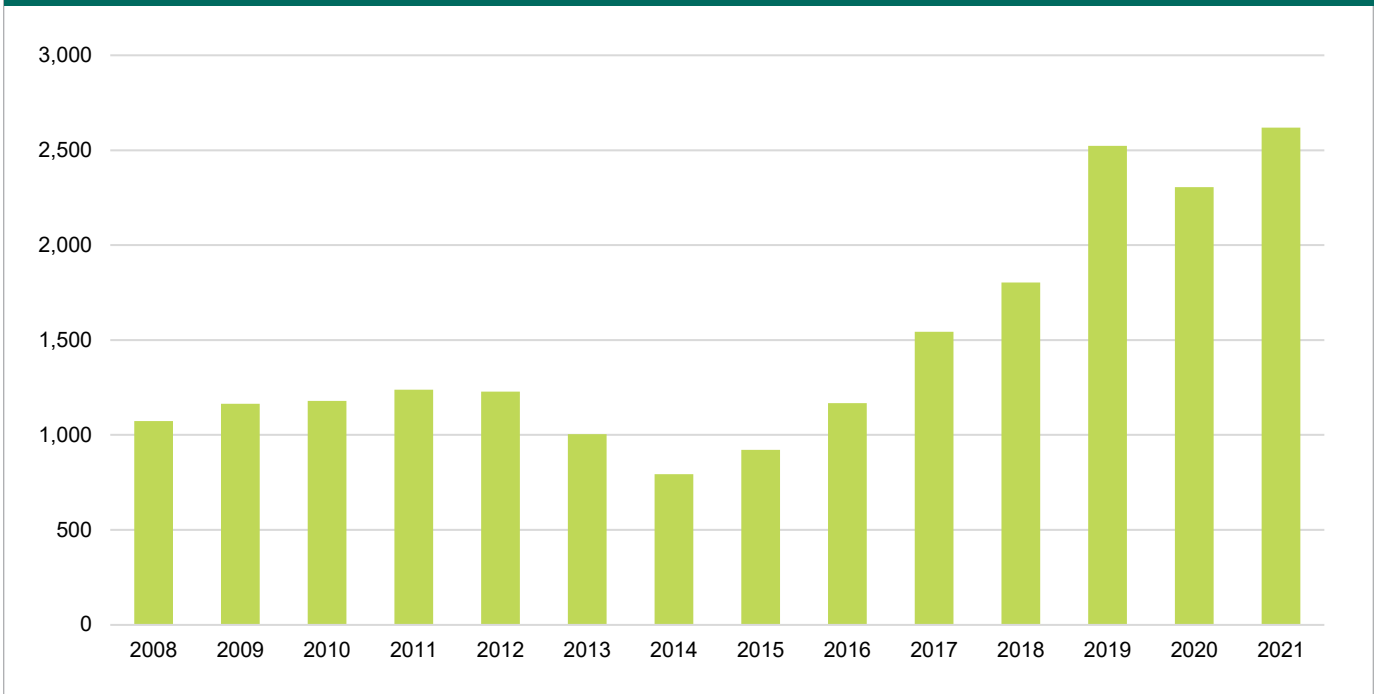
Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

Michigan had its largest registered apprenticeship completer cohort on record in 2021 with more than 2,600 completers. This was up by just over 300 from 2020 and approximately 100 more than the previous high in 2019. Like new apprentices, the number of completers has increased significantly since additional funding and resources were allocated for registered apprenticeship in 2016 across the state. Prior to 2016, the number of completers averaged just under 1,100 each year. This has increased by 900 to approximately 2,000 completers each year since 2016.

On a national scale, Michigan fared favorably compared to other states. In fact, Michigan had the fourth highest number of active apprentices in the nation in 2021. Only California, Texas, and Ohio had more active apprentices than Michigan with Indiana just behind. Michigan also ranked seventh for new apprentices and eighth for completers. The state had the fourth most active programs while only creating the 18th most new programs.

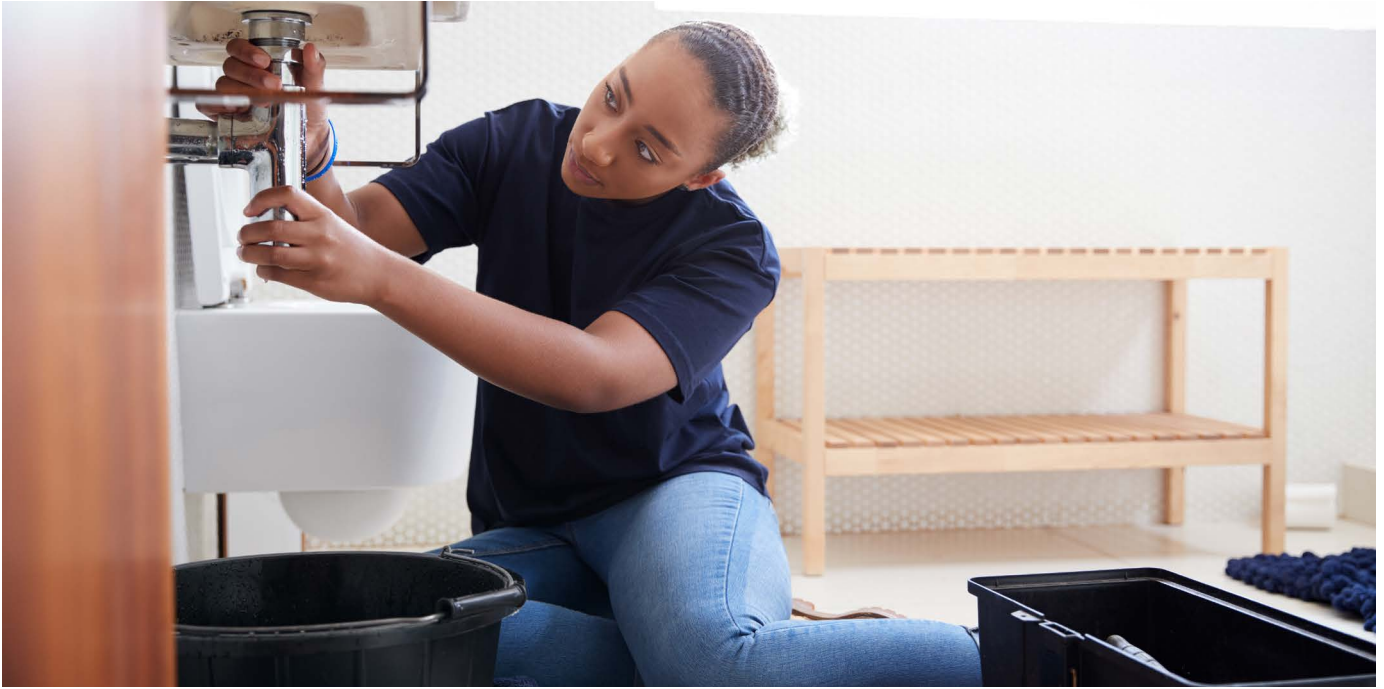


**FIGURE 2: REGISTERED APPRENTICESHIP COMPLETERS IN MICHIGAN BY YEAR**



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





## Demographics

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This section discusses four key demographics to gauge progress and highlight areas of improvement as Michigan continues to invest resources in increasing representation in registered apprenticeship. These demographic groups include women, people of color, veterans, and youth (ages 16 to 18).

### Gender

There were just under 2,200 active women apprentices across Michigan in 2021, accounting for 11.6 percent of all active apprentices. The traditional apprenticeship industries of *Construction* and *Manufacturing* housed 36.3 percent of active women apprentices. In total, women made up just 5.1 percent of all traditional apprentices. Many other industries also had low shares of female apprentices such as *Utilities*, where 1.0 percent of the nearly 600 active apprentices were women.

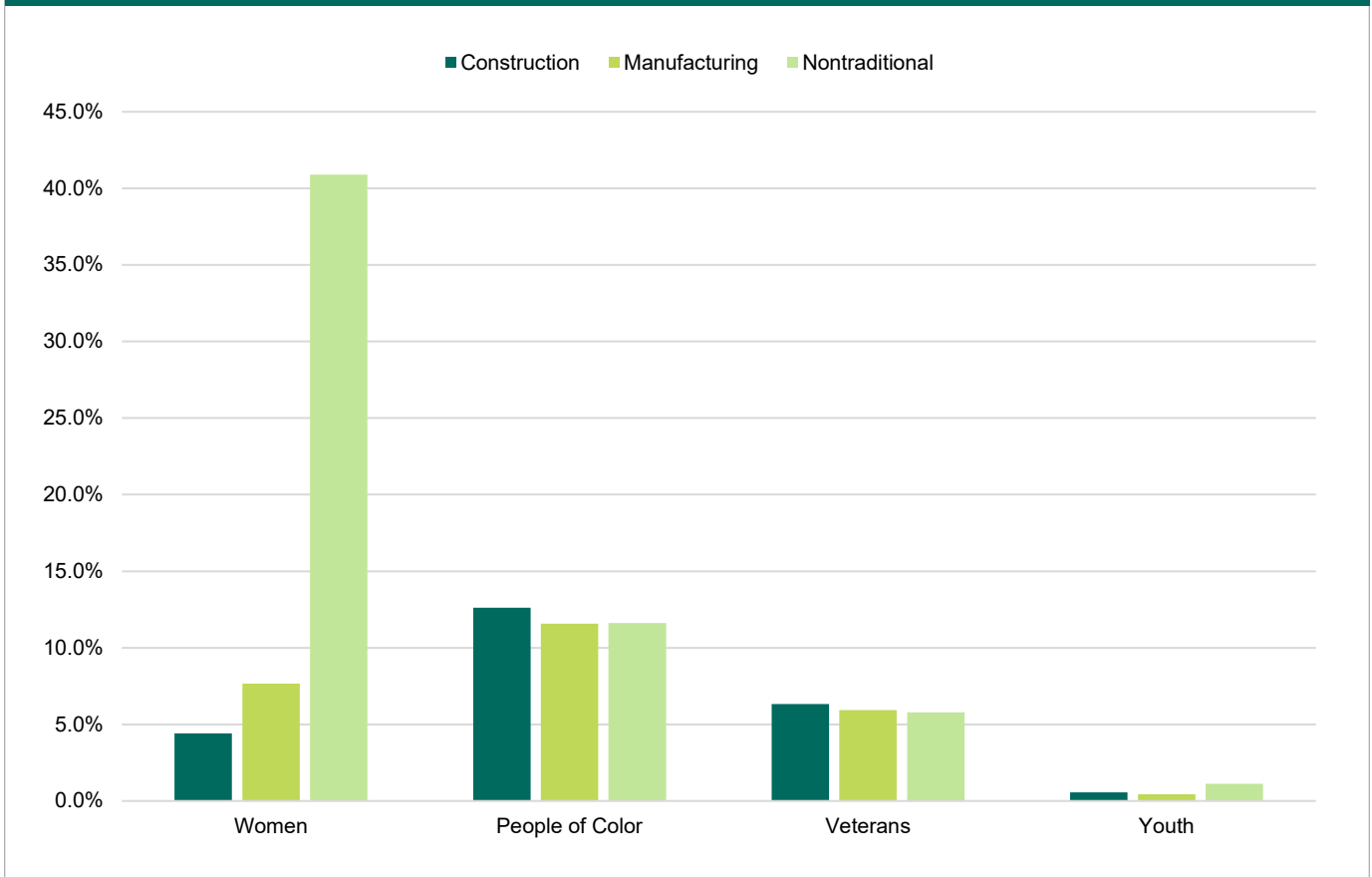
There were a few nontraditional sectors which had an extremely high representation of women in 2021. The top two industries by share of active women apprentices were *Health care and social assistance* and *Retail trade* at 80.2 percent and 67.6 percent, respectively. In total,

these two industries were home to 55.2 percent of all female apprentices. While the traditional apprenticeship industries had lower shares of women, those that were in these fields still accounted for 36.3 percent of all female apprentices in Michigan.

Among occupations, *Nursing assistants* and *First-line supervisors of retail sales workers* had the highest total active female apprentices in 2021 with a share of 22.0 percent and 14.4 percent of the total, respectively. These occupations also had a significant share of women apprentices, at 87.3 percent for *Nursing assistants* and 74.0 percent for *First-line supervisors of retail sales workers*. Women were also highly represented among fields such as *Childcare workers*, *Medical assistants*, and *Recreation workers*.

In 2021, just four occupations had greater than 1,000 active apprentices in Michigan. Each of these occupations are highlighted in Figure 4 and had a share of women within the occupation that was much lower than the 11.6 percent seen across all apprentices. Together, 20.4 percent of active female apprentices were contained within these four occupations.

**FIGURE 3: DEMOGRAPHIC SHARE AMONG ACTIVE APPRENTICES IN MICHIGAN, SELECT INDUSTRIES, 2021**



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

## Race

In 2021, nearly 2,300 (12.2 percent) of active apprentices in Michigan were people of color. Among these apprentices, 85.0 percent identified as Black, 8.7 percent were Native American, and 4.9 percent were Asian.

*Construction* accounted for nearly two-thirds of all active apprentices who were people of color. Within the industry, 12.6 percent were people of color in 2021. *Manufacturing* and *Retail trade* had the second and third most active apprentices who were people of color, with a share of 17.1 percent and 7.8 percent, respectively. *Retail trade* also had a significant share of total active apprentices who were people of color, at 31.4 percent of the sector, the highest among any industry. Just 6.4 percent of active apprentices within *Health care and social assistance*, the third largest apprenticeship industry, were people of color.

As seen in Figure 4, those who are people of color were well represented among *Construction laborers* and *Carpenters*, two of the largest occupations among active apprentices. Other occupations in 2021 with a sizable share of active apprentices that were people of color include *First-line supervisors of retail sales workers* (27.9 percent), *Structural iron and steel workers* (17.7 percent), and *Roofers* (14.6 percent).

## Veteran Status

There were more than 1,100 active veteran apprentices across Michigan in 2021, making up 6.2 percent of total apprentices. Most of these apprentices were concentrated in the traditional industries of *Construction* (65.6 percent) and *Manufacturing* (17.5 percent). *Utilities* held 8.3 percent of all veteran apprentices, with veterans making up 16.0 percent of apprentices in that

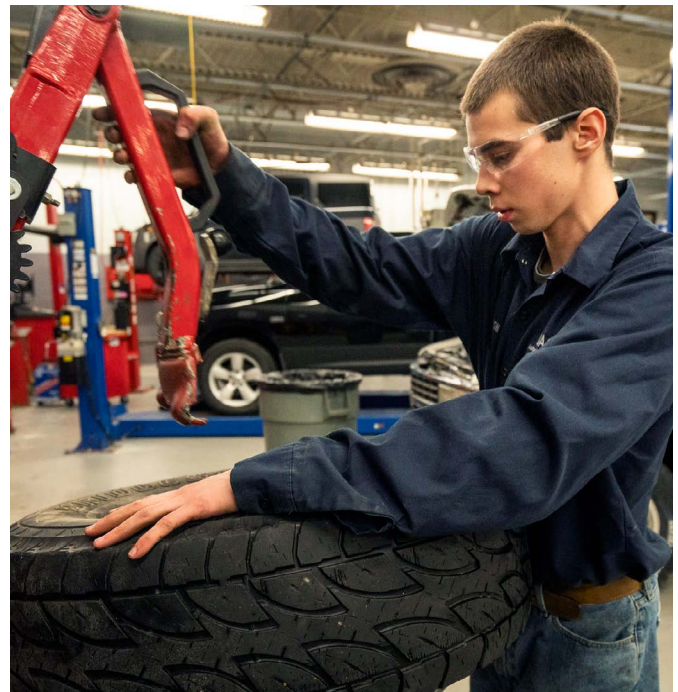
industry (the largest share among all industries). There were very few active veteran apprentices in *Retail trade* or *Health care and social assistance*, two of the larger nontraditional industry sectors.

Over half of all veteran apprentices were in the four largest occupations in 2021. As seen in Figure 4, only *Construction laborers* had a below-average share of veteran apprentices within the occupation at 2.3 percent. Other occupations with a significant share of veteran apprentices were *Electrical power-line installers and repairers* (15.9 percent) and *Millwrights* (8.8 percent).

### Youth Status

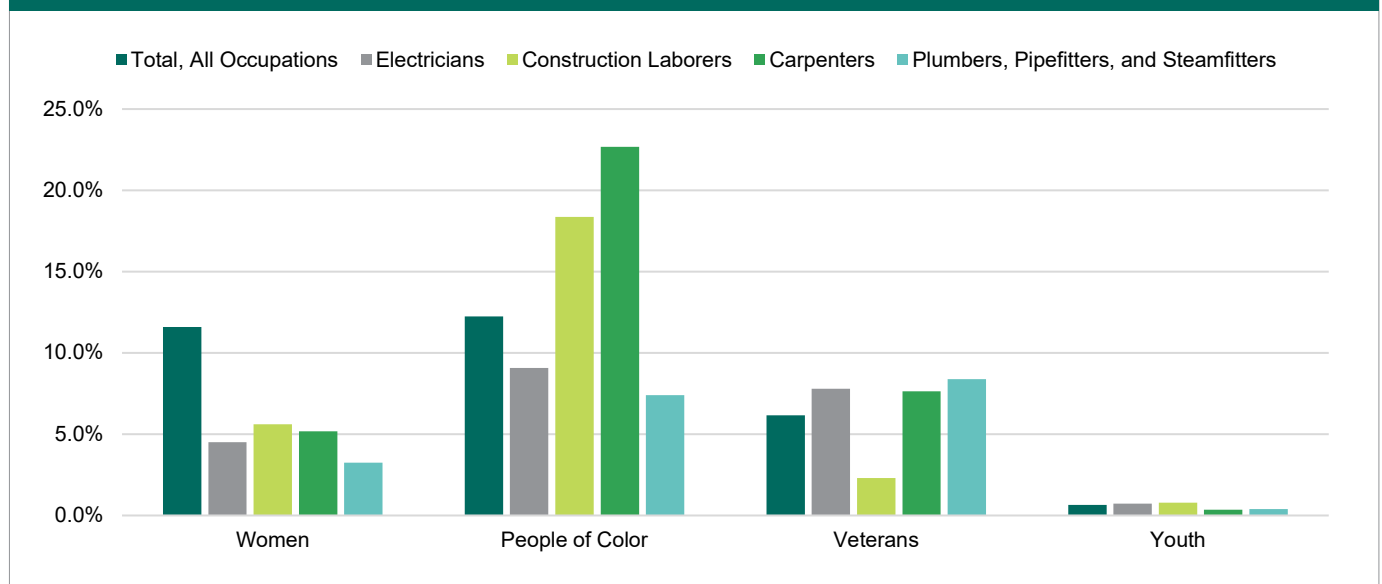
Youth apprentices are defined as those between the ages of 16 and 18 years old. In 2021, there were just over 100 youth apprentices in Michigan. This is significantly lower than the nearly 800 reported in last year's report. Over two-thirds of these apprentices were in traditional apprenticeship industries, with 55.8 percent in *Construction*. *Educational services* was home to just under one-fifth of youth apprentices.

Among occupations, *Industrial engineering technologists and technicians* had the highest share



of youth apprentices within the occupation at 24.7 percent. This occupation also has fewer than 100 total active apprentices. Of larger occupations, the only occupation with a share of youth apprentices equal or greater than 1.0 percent is *Tool and die makers* at exactly 1.0 percent.

**FIGURE 4: DEMOGRAPHIC SHARE AMONG ACTIVE APPRENTICES IN MICHIGAN, SELECT OCCUPATIONS, 2021**



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



## Occupations

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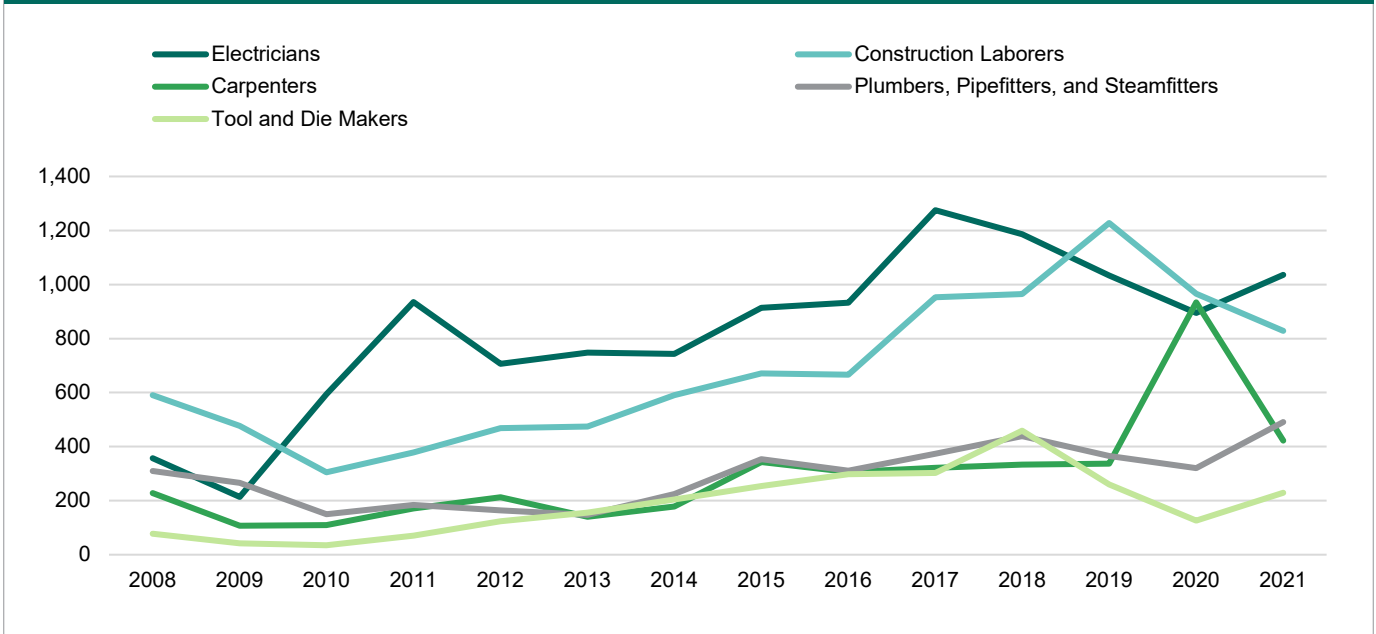
Half of Michigan's total active apprentices in 2021 were spread across four occupations. These occupations include *Electricians* (18.9 percent), *Construction laborers* (13.6 percent), *Carpenters* (9.4 percent), and *Plumbers, pipefitters, and steamfitters* (8.2 percent). Each of these occupations have also welcomed the largest number of new apprentices from 2008 to 2021, and were also the top occupations among completers, except for *Construction laborers*. *Tool and die makers* (4.4 percent) and *Millwrights* (3.8 percent) had the next largest share of active apprentices.

Several occupations saw their largest cohort of new apprentices on record in 2021. These occupations include *Plumbers, pipefitters, and steamfitters* (nearly 500), *Sheet metal workers* (nearly 200), and *Heating, air conditioning, and refrigeration mechanics and installers* (over 100). In total, 24 occupations observed a record number of new apprentices. The last year also saw the third-greatest number of occupations that had more than 100 new apprentices with 16. This trails only 2019 and 2018, where 18 and 19 occupations reached that threshold, respectively.

While many occupations saw increases in the size of their new cohorts in 2021 compared to 2020, there were also a few occupations which reported new apprentices for the first time in 2021. Many of these occupations were relatively small, with fewer than 10 new apprentices. However, *Recreation workers* had approximately 50 new apprentices in the last year. On the opposite side, occupations such as *Chemical equipment operators and tenders* gained zero new apprentices in 2021 after reporting new apprentices in the prior three years.

Of the top occupations by active and new apprentices, four also are among the top five occupations by completers from 2008 to 2021. The four holdovers include *Electricians* (20.2 percent), *Plumbers, pipefitters, and steamfitters* (10.6 percent), *Tool and die makers* (6.2 percent), and *Carpenters* (4.9 percent). Rounding out the top five is *Pharmacy technicians* (4.8 percent) which has seen a significant number of completers in recent years. *Construction laborers* (2.3 percent) only had the 13th most completers over the period.

**FIGURE 5: NEW REGISTERED APPRENTICES IN MICHIGAN BY OCCUPATION**



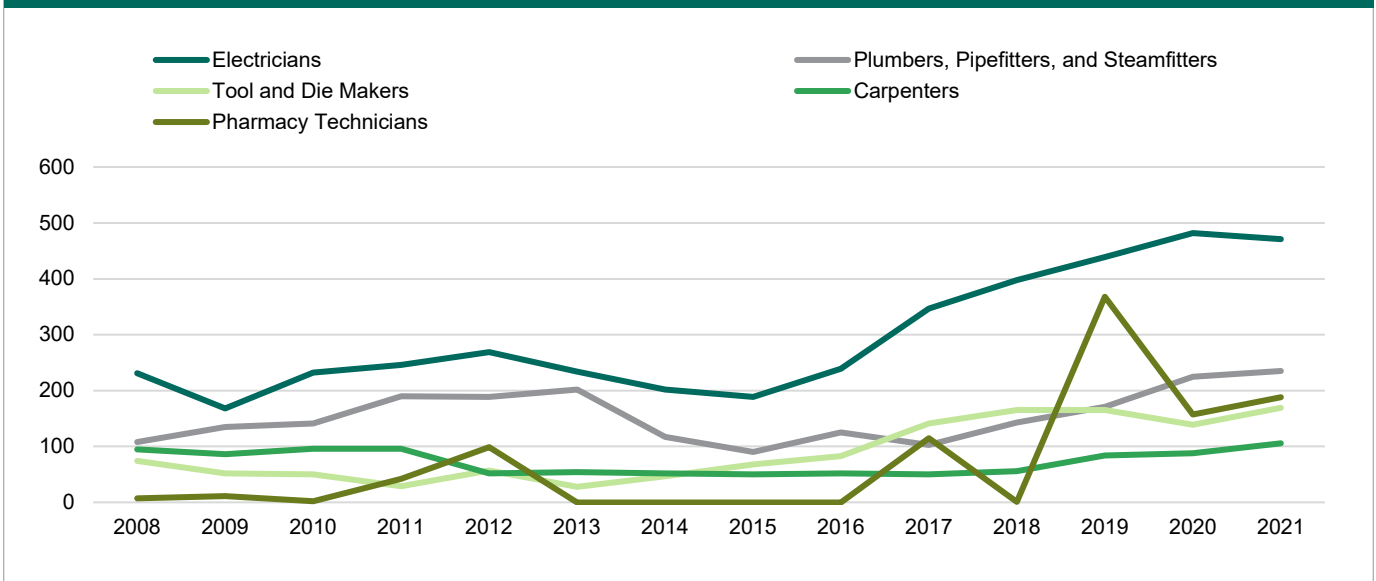
Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor

Overall, the number of completers in Michigan peaked in 2021 with more than 2,600. This was greater than the previous high seen in 2019 at approximately 2,500. Since new apprentice cohorts in recent years have grown and begin to complete their apprenticeship programs, it is unsurprising that Michigan was able to produce a record number

of completers in 2021. This is despite the slight downtick in new apprentices in 2020 and 2021, due to the effects of the COVID-19 pandemic.

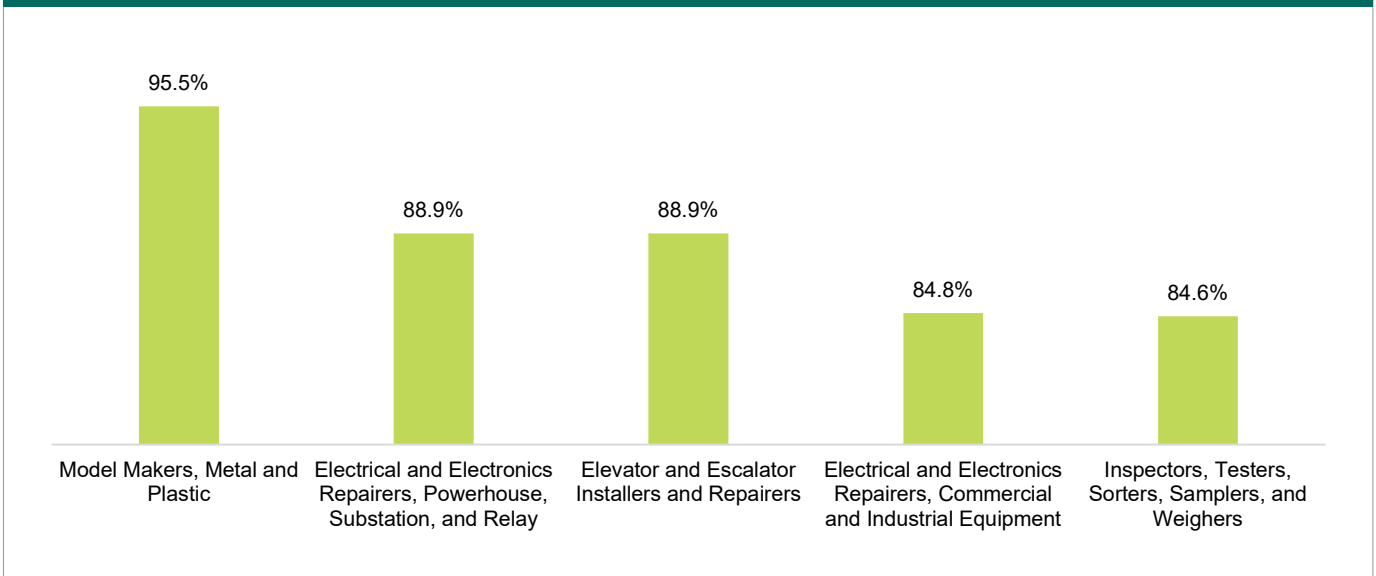
Figures 5 and 6 show the change in the number of new apprentices and completers statewide for the top five occupations in each group.

**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, 2021



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

## Completion Rates

Occupational completion rates are a key metric for gauging the success of the apprenticeship training model in Michigan. These rates are measured as the percentage of new registered apprentices who complete their program within their expected time frame. This period is calculated by taking the length of the program and adding a 50.0 percent extension to allow for ample time for the apprentice to complete. An example of this would be if an apprentice is enrolled in a four-year program, they would be given six years to complete. The numerator in this equation is the most recent cohort of completers for which data are available, this being

2021 completers. So, the earliest year a new apprentice would have started in a four-year program would have been 2015.

Across all occupations, the completion rate in 2021 was 37.2 percent. *Model makers, metal and plastic* had the highest completion rate among occupations with 10 or more completers at 95.5 percent, with just over 20 completers. The next occupations with the highest completion rates were *Electrical and electronics repairers, powerhouse, substation, and relay* and *Elevator and escalator installers and repairers*, both of which had a rate of 88.9 percent as seen in Figure 7.



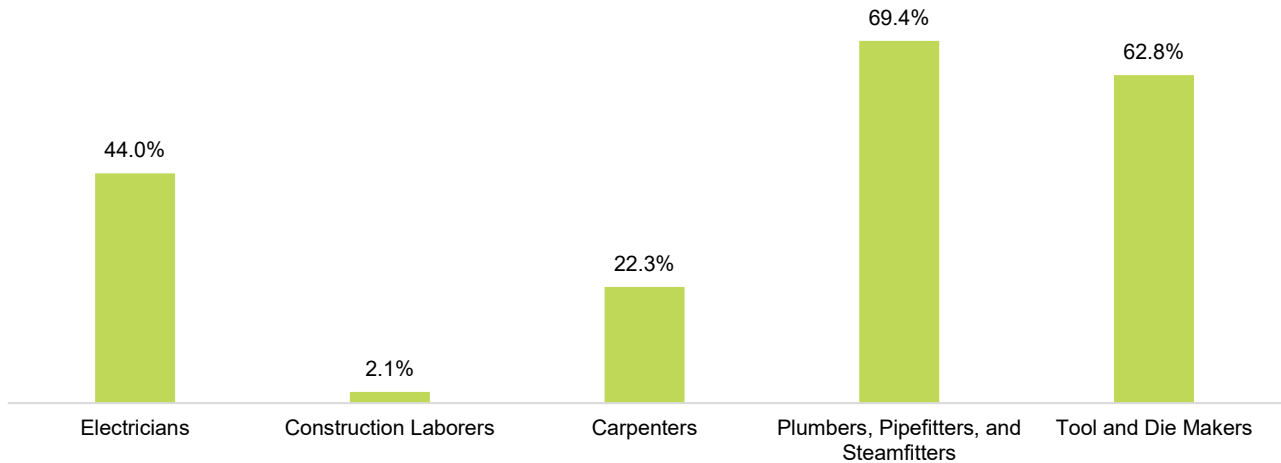


Figure 8 shows the completion rates for the occupations with the largest number of active apprentices. Of note, *Construction laborers* has a completion rate of just 2.1 percent. *Plumbers, pipefitters, and steamfitters* has the highest completion rate of the group at 69.4 percent.

It is also important to note that each of the demographic groups mentioned in the previous section had lower

completion rates than their peers. Women had a completion rate of 33.1 percent compared to 37.7 percent for men. The rate for people of color was 28.2 percent, 14.8 percentage points lower than those who are white. Veterans had a completion rate of 36.6 percent whereas nonveterans were at 41.4 percent. The largest gap was youth, with a rate of 13.7 percent, while non-youth had a rate of 37.4 percent.

**FIGURE 8: COMPLETION RATES FOR LARGEST APPRENTICESHIP OCCUPATIONS IN MICHIGAN, 2021**



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

# Employment Outcomes

Using administrative wage record data is crucial to understanding post-apprenticeship completion success. Combining these data sources allows for the analysis of both employment status and wages earned one year after completion among 2020 completers statewide. In this analysis, the one-year-after wage is comparable to a 25th percentile wage earned for the occupation (a proxy for starting wages). New to this report is the analysis of employment outcomes among industries and demographic groups.

Occupations, industries, and demographic groups with 10 or more completers employed one year after completion were available for analysis. Those with fewer than 10 were suppressed due to confidentiality. Among occupations, 21 met this criterion compared to 19 in the 2021 report and 13 in the 2019 report. Data

for occupations such as *Carpenters*, *Cement masons and concrete finishers*, and *Nursing assistants* were suppressed. Figure 9 displays the one-year-after wage and 25th percentile wage for 10 occupations with the greatest number of completers for which wage record data were available.

In total, the median hourly one-year-after wage for all occupations was \$33.69. This is compared to the 25th percentile wage for all occupations in 2021 statewide of \$14.34, nearly \$20.00 less an hour. Furthermore, the median wage for all occupations in Michigan in 2021 was \$21.73. Each of the 21 occupations analyzed had a median one-year-after wage greater than the 25th percentile wage for the occupation, although the one-year-after hourly wage for *Aircraft mechanics and service technicians* was only \$0.01 greater.

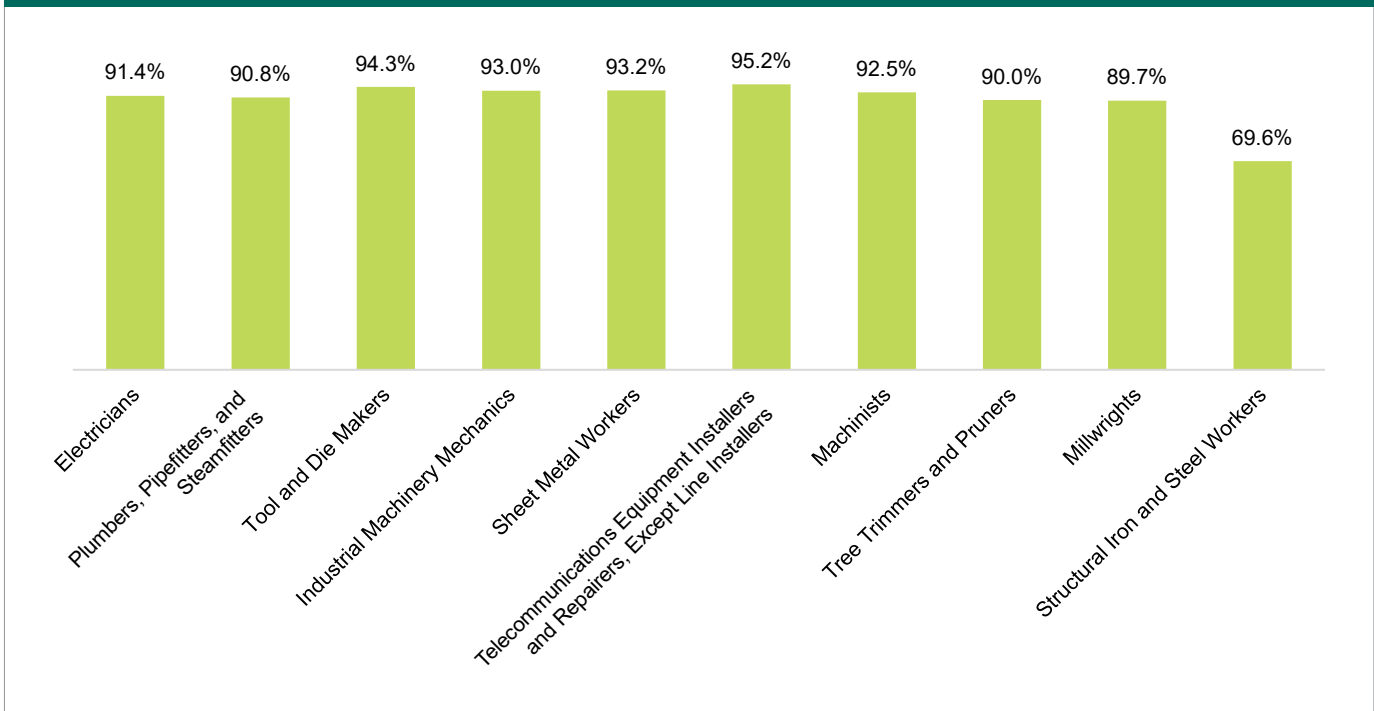
**FIGURE 9: EARNINGS ONE YEAR AFTER COMPLETING AN APPRENTICESHIP IN MICHIGAN, SELECT OCCUPATIONS, 2021**



Source: Registered Apprenticeship Partners Information Management Data System (RAPIDS), Office of Apprenticeship, U.S. Department of Labor; Michigan Department of Labor and Economic Opportunity; 2021 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 IN MICHIGAN, SELECT OCCUPATIONS, 2021**



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

There were 12 occupations that had a one-year-after hourly wage that was \$10.00 more than the starting wage for the occupation. This was led by *Electrical power-line installers and repairers*, where the median one-year-after hourly wage is more than \$40.00 greater than the occupation’s starting wage. Among top occupations, *Electricians* had a median one-year-after wage of \$38.51, roughly \$16.00 more than the starting wage for the occupation.

Further analysis with administrative wage record data allows for the calculation of employment rates among 2020 apprenticeship completers in Michigan. This was calculated by taking the share of completers who were earning wages one year after completing. The rate for all 2020 completers in Michigan was 89.2 percent, down from the 95.9 percent observed among 2019 completers in last year’s report. Among occupations, most showed a favorable employment rate. Four had an employment rate of 100.0 percent. *Structural iron*

*and steel workers* had the lowest rate at 69.6 percent, the lowest among the top 10 occupations in terms of completers.

### Industries

Among the traditional apprenticeship industries of *Construction* and *Manufacturing*, 2020 completers faced favorable employment outcomes. The median one-year-after wage for these industries were \$35.17 and \$34.99, respectively. Each industry also had an employment rate of around 90 percent.

*Health care and social assistance*, which had the third most completers, was the lowest-paying sector with a one-year-after wage of just \$17.50. The industry, conversely, had the highest employment rate at 93.9 percent. *Utilities* had the highest median one-year-after wage at \$47.49. The lowest employment rate was 84.8 percent for *Educational services*.



## Demographics

Between men and women, men earned higher wages upon completing an apprenticeship. Men had a median one-year-after wage of \$34.69 compared to that of women at \$22.41. Women, however, had a higher employment rate at 94.2 percent compared to 88.8 percent for men. It should be noted that women were overrepresented in *Health care and social assistance*, where one-year-after wages were significantly lower than other industries that tend to be male-dominated.

Both people of color and white completers earned favorable post-completion wages. Those who were white earned a median wage of \$34.00 while people of color had a wage of \$31.56. People of color, however, had a much lower employment rate at 78.7 percent compared to 90.1 percent for white completers.

Veterans and nonveterans faced very similar employment outcomes. Veterans had a higher one-year-after wage of \$36.36 that was about \$2.00 more than that of nonveterans. The employment rate for veterans was 91.8 percent compared to 89.2 percent for nonveterans.

Data among youth apprenticeship completers was suppressed for confidentiality.

# Traditional and Nontraditional Industries

As previously discussed throughout this report, traditional registered apprenticeship industries refer to *Construction* and *Manufacturing*. Most apprentices in Michigan fall into either of these two industries. Nontraditional industries include, but are not limited to, *Health care and social assistance*, *Retail trade*, and *Utilities*. Statewide, there has been a push to expand resources to support nontraditional apprenticeships.

## Traditional

In 2021, there were 15,200 active traditional apprentices in Michigan, making up 81.9 percent of all active apprentices. Compared to nontraditional apprentices, there were roughly 4.5 times more traditional apprentices across the state. *Construction* had nearly two-thirds of all active apprentices with 63.8 percent. *Manufacturing* had the second-highest share at 18.1 percent.

From 2008 to 2021, traditional industries accounted for 79.6 percent of all new active apprentices in Michigan. This share has come down in recent years as new registered apprentices have moved into a more diverse array of industries. From 2008 to 2017, traditional industries had a share of 83.4 percent of

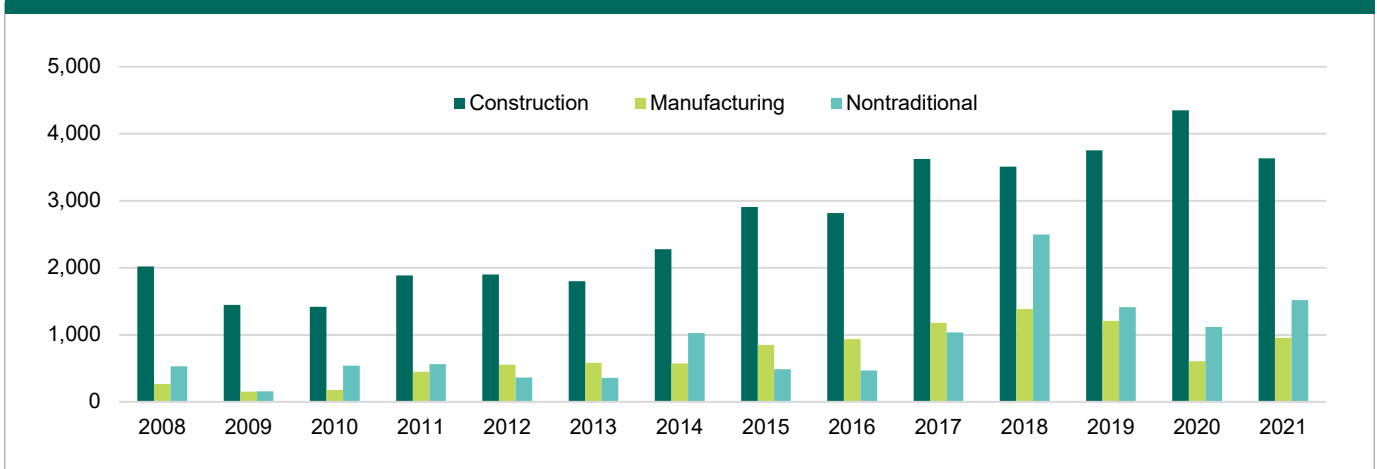
all new apprentices, whereas this share was just 74.8 percent from 2018 to 2021.

In 2021, 75.2 percent of all new apprentices were in traditional industries. *Construction* had 59.5 percent of the total while *Manufacturing* had 15.7 percent. The share of new apprentices in *Construction* was down significantly from the 71.6 percent share observed in 2020.

Traditional apprentices also made up three-quarters of all apprenticeship completers since 2008. *Construction* had a share of 51.8 percent of all completers while 23.8 percent were in *Manufacturing*. In 2021, the share of traditional completers was just 66.3 percent, while *Construction* saw just 42.5 percent of completers and *Manufacturing* 23.9 percent. The share in *Construction* was the lowest since 2019 and the second lowest on record.

The share of *Construction* completers has been on the decline in recent years. From 2008 to 2016, *Construction* accounted for 60.2 percent of all completers. This has decreased to 43.7 percent from 2017 to 2021. The number of total completers in *Construction* has increased during this time, however, with over 1,000 each year since 2019. This includes a record number in 2021 with more than 1,100.

**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



## Nontraditional

Just 18.1 percent of active apprentices in Michigan were in nontraditional industries in 2021. In total, this amounted to just under 3,400 apprentices. Over three-quarters of nontraditional apprentices were contained within four industries. These include *Health care and social assistance* (30.0 percent of nontraditional apprentices), *Utilities* (17.7 percent), *Retail trade* (16.8 percent), and *Administrative and support and waste management and remediation services* (11.4 percent). Among all apprentices in Michigan, the only nontraditional industry with a share of active apprentices greater than 5 percent was *Health care and social assistance* at 5.4 percent.

Nontraditional industries are increasing in representation among new apprentices. From 2008 to 2017, these industries made up just 16.6 percent of all new apprentices. This share has increased significantly to 25.2 percent of all new apprentices since 2018. This spike can largely be credited to the emergence of new opportunities within *Health care and social assistance*.

Prior to 2018, there were fewer than 100 total new apprentices. Since then, there have been over 1,900 and have averaged nearly 500 each year. *Retail trade* and *Transportation and warehousing* have both also observed more new apprentices in recent years. About one-quarter of new apprentices were in nontraditional industries in 2021.

Trends among completers have been very similar to that of new apprentices in nontraditional industries. From 2008 to 2016, nontraditional industries accounted for just under one-fifth of all completers. This has increased by about 10 percentage points to 29.6 percent for 2017 to 2021 as the number of nontraditional completers has increased significantly. In 2021, 33.7 percent of all completers were in nontraditional industries.

# Regional Apprentices and Programs

This report uses the same methodology as the previous edition, where regional apprentices are determined by program location rather than where the apprentice lives. This section will examine the breakdown of registered apprentices by each of Michigan’s 10 prosperity regions.

Of the nearly 18,600 active apprentices across Michigan, 41.3 percent were in the Detroit Metro region. This was followed by East Michigan (15.1 percent), West Michigan (12.9 percent), and South Central Michigan (12.3 percent). Just 3.0 percent of active apprentices in Michigan were in either Northeast Michigan, Northwest Michigan, or the Upper Peninsula.

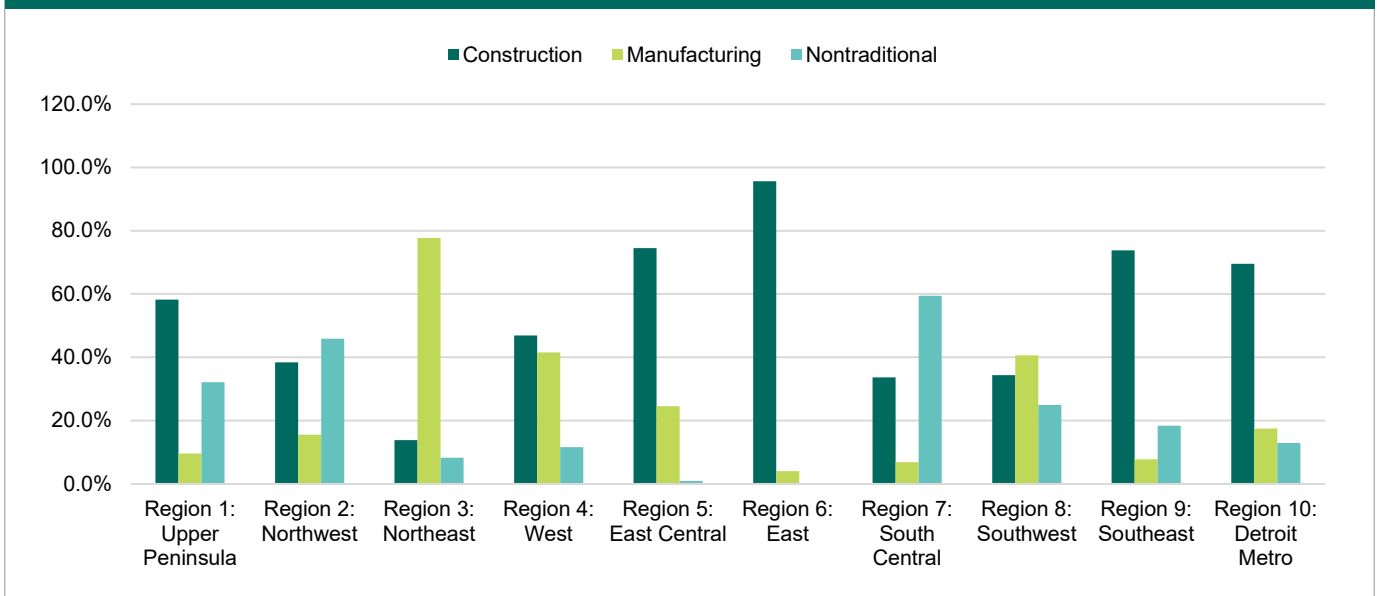
*Construction* had the largest share of active apprentices in six of 10 prosperity regions in Michigan in 2021. East Michigan had the largest share at 95.6 percent followed by East Central Michigan at 74.5 percent. Northeast Michigan and Southwest Michigan had a majority share of *Manufacturing* apprentices at 77.8 percent and 40.6 percent, respectively. Nontraditional apprentices had the largest share in South Central Michigan (59.4 percent) and Northwest Michigan (45.9 percent).

Within the Detroit Metro region, *Carpenters* were well represented with nearly 1,700 active apprentices. This accounted for 22.0 percent of all Detroit Metro apprentices and 96.7 percent of all *Carpenters* statewide. *Electricians* was the second largest occupation in the region with just under 1,200. The Detroit Metro region was also home to 100.0 percent of the over 400 active apprentices in the occupation of *First-line supervisors of retail sales workers*.

*Construction laborers* made up most active apprentices in East Michigan with nearly 2,300. This was roughly four-fifths of all apprentices in the region and 90.0 percent of all *Construction laborers* in the state. Nearly 80 percent of all *Cement masons and concrete finishers* were in East Michigan. In West Michigan, there were over 900 *Electricians*, making up 38.4 percent of all apprentices in the region. This was 26.3 percent of all *Electricians*, the second highest share in the state behind the Detroit Metro region.

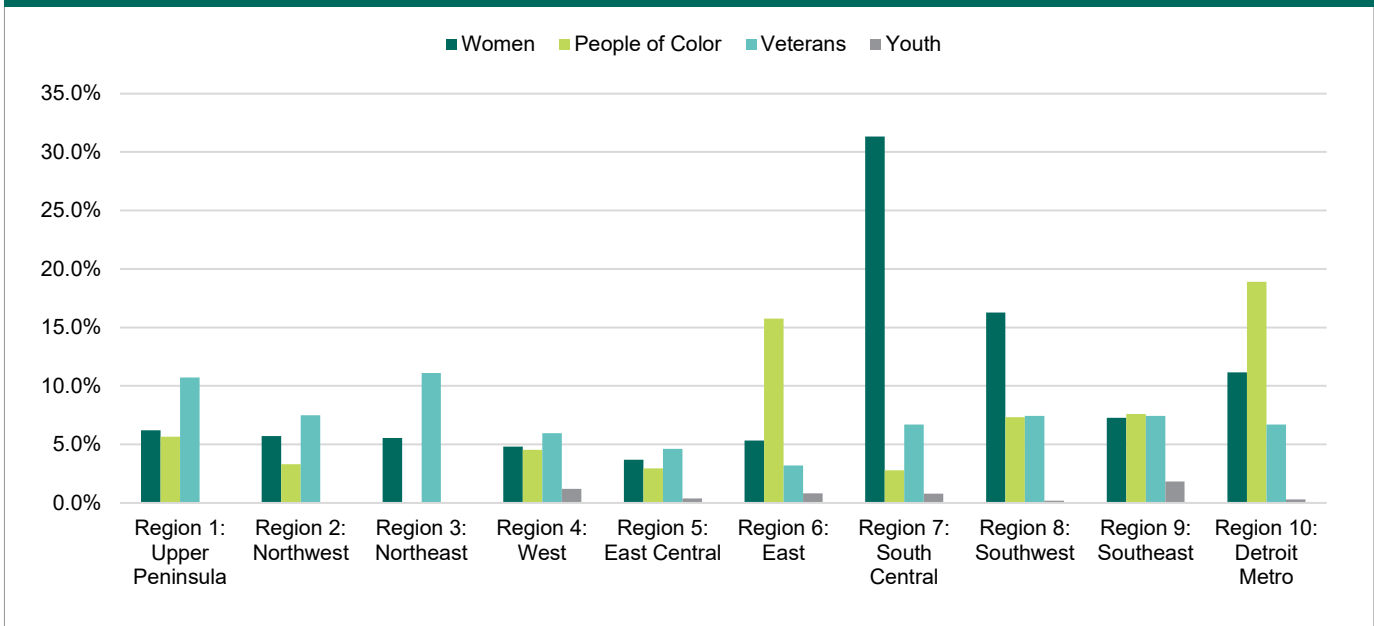
Nearly one-third of active apprentices in South Central Michigan were women. This is unsurprising due to the large presence of nontraditional industries in the

**FIGURE 12: ACTIVE REGISTERED APPRENTICES BY INDUSTRY AND PROSPERITY REGION, 2021**



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

**FIGURE 13: ACTIVE REGISTERED APPRENTICES BY DEMOGRAPHIC AND PROSPERITY REGION, 2021**



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

region (particularly *Health care and social assistance*). Southwest Michigan had the second highest share at 16.3 percent followed by the Detroit Metro region at 11.2 percent. The Detroit Metro region had the largest number of women apprentices with just under 900 (39.7 percent of all female active apprentices).

People of color were primarily in apprenticeship programs in the Detroit Metro region in 2021. Just under 64 percent of all apprentices who were people of color were in this region, accounting for 18.9 percent of Detroit Metro apprentices. East Michigan had the second highest share of apprentices who were people of color with 15.7 percent.

The Detroit Metro region also had the most veteran apprentices in 2021 with more than 500, or 44.8 percent. Youth apprentices were not well represented across Michigan. Only Southeast Michigan and West Michigan had shares of youth active apprentices greater than 1 percent.

In 2021, there were more than 6,100 new registered apprentices. The Detroit Metro region was the only region to have more than 1,000 new apprentices, and in total, had nearly 2,500. This was just under 41 percent of all new apprentices in the state. Both South Central Michigan and East Michigan had more than 900 and West Michigan followed with over 700. This was the first

year since 2016 where only one region had more than 1,000 new active apprentices.

Among completers, over half (52.3 percent) were in the Detroit Metro region in 2021. This was followed by West Michigan (15.0 percent) and South Central Michigan (8.9 percent). Southeast Michigan had its greatest number of completers on record with over 200 in 2021.

There were over 1,200 active registered apprenticeship programs across the state in 2021. While it had the third most active apprentices, West Michigan had the greatest number of programs with just under 400 (30.5 percent). The Detroit Metro region had the second highest share at 20.9 percent followed by Southwest Michigan at 15.3 percent. No other region had a share of active programs greater than 10 percent.

The number of new registered apprenticeship programs in Michigan has decreased during the COVID-19 pandemic. There were 44 in 2020 and 60 in 2021. From 2008 to 2019, there were an average of 88 new programs each year. The previous low for new programs was 56 in 2009 while there were 60 in 2008. The Detroit Metro region had 13 new programs in 2021. This was followed by 10 in Southwest Michigan and nine in West Michigan.

## Conclusion

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Michigan continues to invest resources into the expansion of registered apprenticeships across the state. These programs help develop a highly skilled workforce and create a talent pipeline for critical occupations while producing favorable employment outcomes for individuals. Despite the impacts of the COVID-19 pandemic on Michigan, the work of expanding apprenticeships across the state has continued to put Michigan among the leaders nationwide. There were nearly 18,600 active apprentices in Michigan in 2021. This was accompanied by more than 6,100 new apprentices and a record 2,600 apprenticeship completers.

While traditional apprenticeship industries dominate registered apprenticeship, a push to diversify and promote nontraditional apprenticeships in Michigan has seen other industries bloom in recent years. Since 2018, 25.2 percent of new apprentices were in nontraditional industries such as *Health care and social assistance*. Prior to 2018, just 16.6 percent of new apprentices were in nontraditional industries. There has also been a focus on increasing participation among underrepresented demographics in apprenticeship programs. The most recent 2021 cohort of new apprentices saw the second largest share of both women and people of color at 16.7 percent and 13.4 percent, respectively.

Registered apprenticeship programs are proven to also produce favorable employment outcomes for those who go on to complete a program. Throughout an apprenticeship, wages progress as more skills are collected. Post-completion, data shows that those who complete a registered apprenticeship earn significantly more than comparable starting wages for all who work in the occupation, and in many cases, more



than the median wage for the occupation. On top of this, employment rates for those who complete an apprenticeship are near 90 percent. Michigan continues to be a leader in registered apprenticeship as these programs provide talent pipelines and career pathways for employers and job seekers across the state.



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