

Dane County

2025 WORKFORCE PROFILE



State Narrative for County Profiles

Wisconsin's labor market experienced a strong year in 2024. Employment reached record levels, inflation appeared on the wane, and interest rates are accommodating a largely reconstructed supply chain. In addition, real wages turned positive, and consumer spending was robust.

The primary challenge still facing the future economic construct is the labor quantity challenge and its broader economic impacts.

Wisconsin Jobs

The 2024 employment picture was favorable for Wisconsin, reaching new records in December at 3,076,500. The state's low unemployment rates were also noteworthy registering 3.0% or below the entire year. Although setting new records is always a good sign, new highs in employment would be expected through new expansionary economic periods.

Total non-farm employment also reached new highs, climbing through the year to peak in August at a seasonally adjusted basis of 3,048,000 and consolidating high levels through the remainder of the year, ending in December at 3,042,100. That marks a 1.6% increase over the pre-pandemic highs set in December 2019.

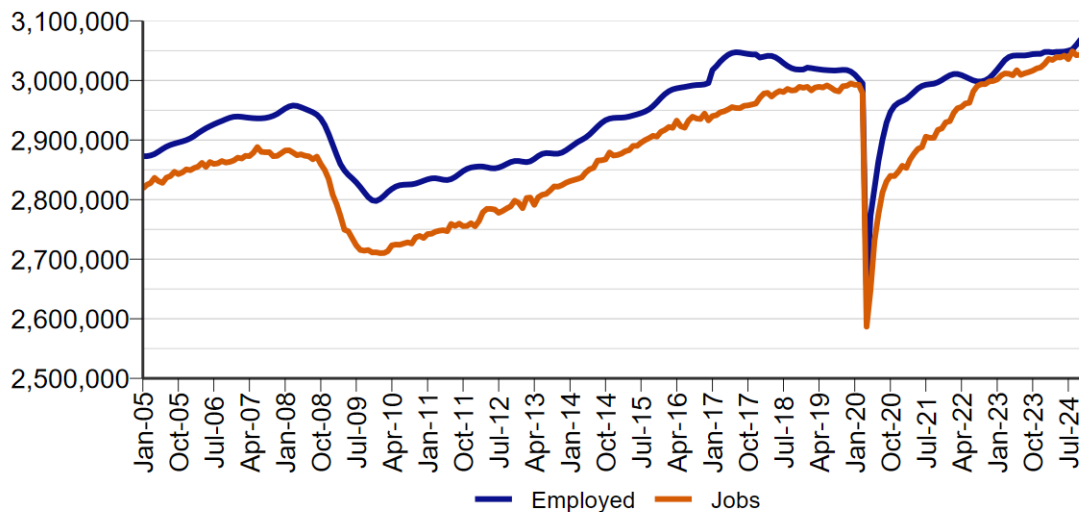


Figure 1: Wisconsin employment and jobs.

Economy

Wisconsin Gross Domestic Product (WGDP) reached new highs in nominal and real dollar terms in 2024¹, at \$456 billion or \$357 billion in real 2017 dollars. After a slower recovery coming out of the COVID-19 recession, Wisconsin's GDP growth rate has mimicked that of the country.

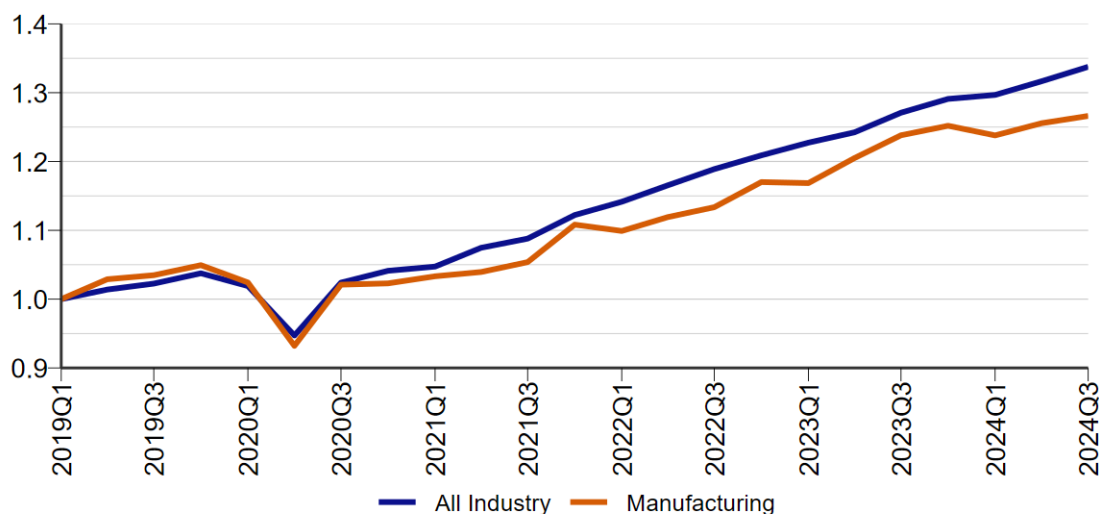


Figure 2: GDP growth index (2019Q1 = 100).

Many industry sectors were vibrant. Construction industry jobs hit new records, surpassing 140,000. Healthcare jobs also set new highs at 324,200. The leisure and hospitality sector recovered almost all the nearly 50% loss of jobs experienced during the COVID-19 recession, finishing with 285,200 jobs. Manufacturing jobs rose above 2023 levels to 481,200, but have not yet returned to pre-Covid19 levels.

Wisconsin ranks first in the number of manufacturing jobs per government job and second in manufacturing jobs share of total jobs. However, state-level manufacturing output was relatively weak against overall economic output. Two of the state's primary manufacturing industries, fabricated metal and machinery manufacturing, lost jobs through 2024. Fabricated metal manufacturing jobs peaked in July 2019, before the COVID-19 recession at 79,400 jobs, and ended 2024 with 74,300. Machinery manufacturing peaked in early 2023 with 68,800 jobs and finished 2024 with 67,200.

¹Third quarter 2024 is latest data available.

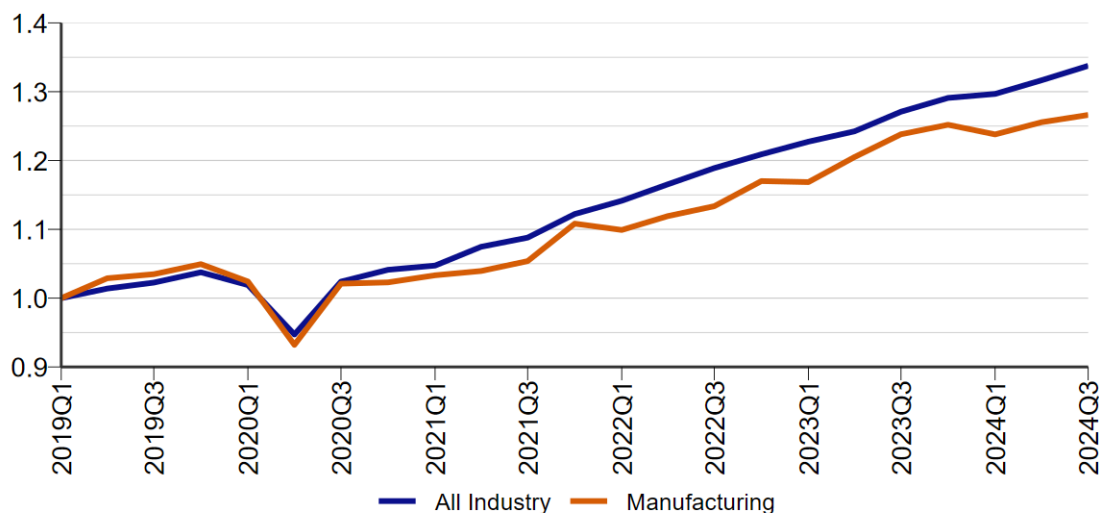


Figure 3: Wisconsin all industry v manufacturing growth (2019Q1 = 100).

While the durable goods manufacturing sector saw declines, non-durable goods manufacturing in Wisconsin has made headway. Jobs in the non-durables industries have increased since the pre-Covid high of 198,600 in July of 2019, to 201,000 in December 2024. Most of that has occurred in the food processing industry.

Labor Quantity Challenges

Employers continue to express challenges finding workers. This situation is being felt in all industries and most occupations – locally, regionally, and globally. Even China is experiencing population and workforce declines. Industries that are showing steady job growth, such as construction and healthcare, are limited by the number of workers available for positions.

As noted in studies dating back to 2000, there are not sufficient numbers of young workers to fill the jobs being vacated by the generation of baby boomers and the increased demand for workers associated with economic growth. The number of workers entering the labor market is essentially the same as the boomers exiting. A growing economy necessitates an increasing labor force or at least a more productive one. Wisconsin's labor force growth has remained close to zero.

The new high in Wisconsin's labor force reached in December 2024 of 3,170,300 is only 0.63% above the previous high in July 2017 and only 0.83% above the peak before that in June of 2009. That amounts to an annual average labor force growth rate of 0.08% per year, or about zero over 15 years.

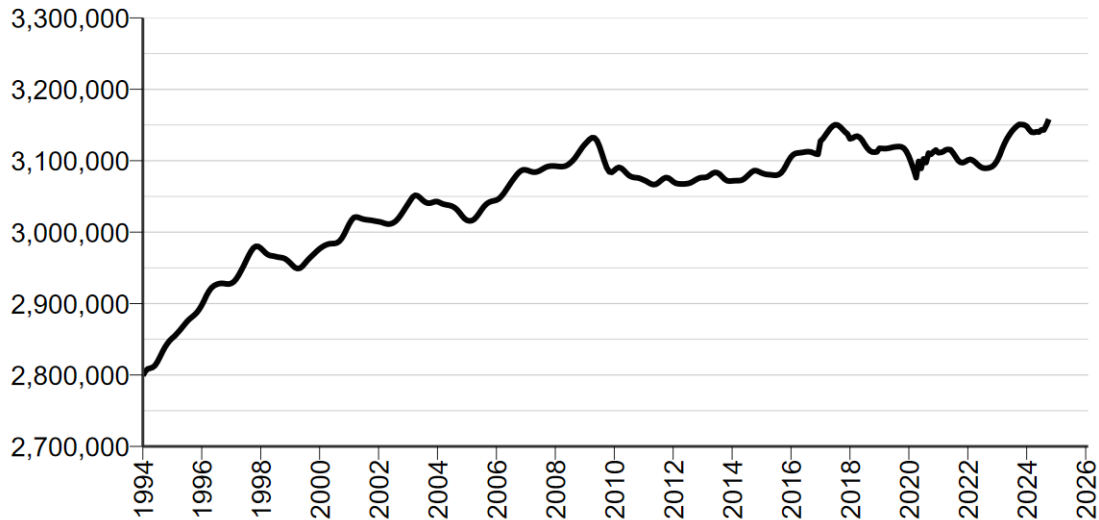


Figure 4: Wisconsin labor force.

This shift has long been anticipated and is well documented. The front edge of the baby boomers turned 63 years old in 2009. By 2024, the back edge of the boomers (those born in 1964) were 60 years old. And while the labor force participation rates of workers 65 and older has increased since the 1990s, the remaining tenure of the boomers is short.

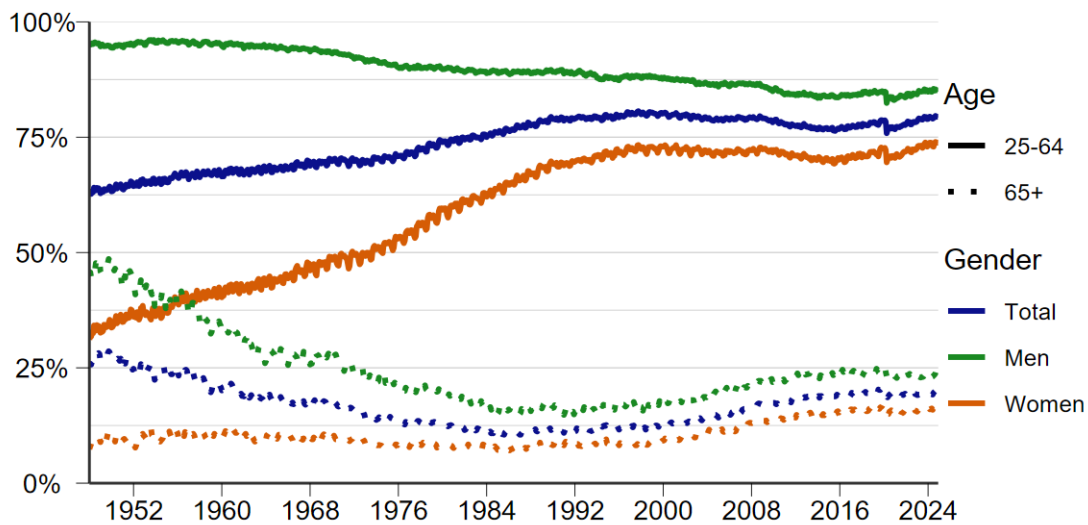


Figure 5: US labor force participation rate.

Below is a graph of Wisconsin's population and labor force projected out to 2040 based on the latest information from the Wisconsin Department of Administration Demographic Services. On a decennial basis, Wisconsin's population has already peaked. This suggests that the workforce will not experience substantial growth moving forward.

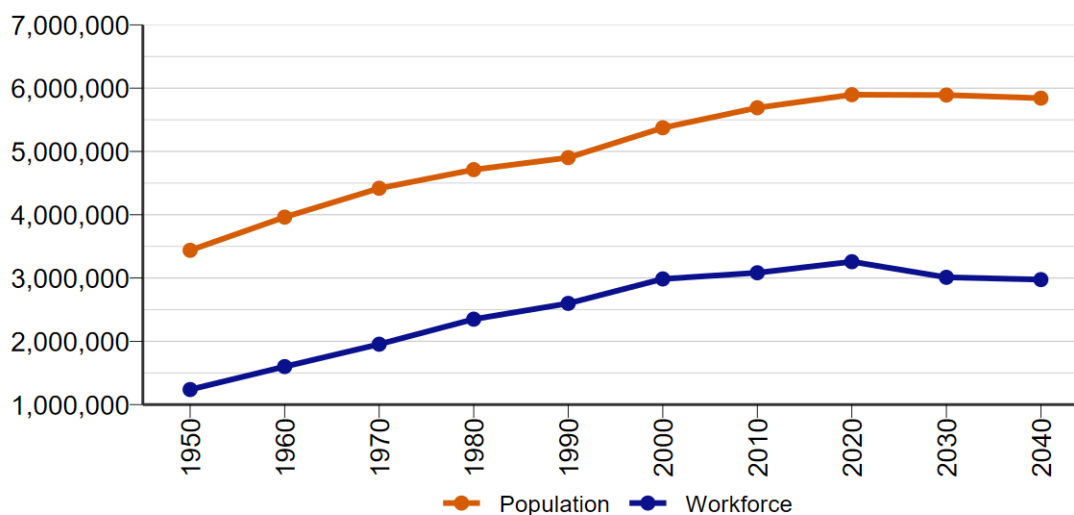


Figure 6: Wisconsin population and workforce projections.

While the overall situation has been realized for some time, the actual quantity of the shortfall has been undetermined until now. Staff at the Wisconsin Department of Workforce Development's Office of Economic Advisors estimate that by 2031, the state could face a labor shortage exceeding 241,000 workers. (See Labor Supply Projections for Wisconsin 2020 – 2040, Winters, Kaur, and Otis, [Labor Supply Projections for Wisconsin](#)).

New Construct

Human resource constraints affect the entire economic construct. As one of the three primary components of economic inputs – along with natural resources and capital – a compromise in the abundance of labor permeates the economy. Having never encountered a labor constraint before, it needs to be noted – old models and old policies do not apply.

Moreover, the labor quantity challenge is a macroeconomic phenomenon. It cannot be remedied with microeconomic solutions. Microeconomic attraction and retention incentives of higher wages, better benefits, early exposure, and more are, at best, short-term and limited symptom remedies.

Jobs will go unfilled. Macroeconomic solutions to the challenge include:

1. A workable immigration policy
2. Reducing barriers to employment (see [2023 Wisconsin County Profiles](#))
3. Expanding trade
4. Technology infusion

Altering a fundamental input of the macroeconomic construct will impact all sectors. The limited and shifting human resource segment will alter income streams, change demand for goods and services, and affect the provision of public goods and services.

Wisconsin's economic health and vigor has been illustrated in the employment and jobs data. However, record low unemployment rates signify two usually unassociated yet coupled performance indicators. On the one hand, low unemployment rates indicate an engaged labor force – a relatively large numerator. On the other hand, in today's environment, low unemployment rates indicate a scarce labor force – a relatively small denominator.

This is an unprecedented situation – and it is not likely to resolve itself quickly.

Yet to be explored are how the limited labor pool and aging population effects other critical economic drivers, such as personal income, as a significant portion of the population (Baby Boomers) shifts to transfer payments that are fixed in real dollar terms, housing stock, dependency ratios, and fiscal balances.

One major unknown on the horizon are the effects that Artificial Intelligence (AI) will have on the future of economic and workforce development. The Governor's Task Force on Workforce and Artificial Intelligence Advisory Action Plan (dwd.wisconsin.gov/ai-taskforce/pdf/ai-advisory-action-plan.pdf) outlines some of the expected effects of AI. For example, the chart below sheds some light on the extent that occupations may be affected by AI.

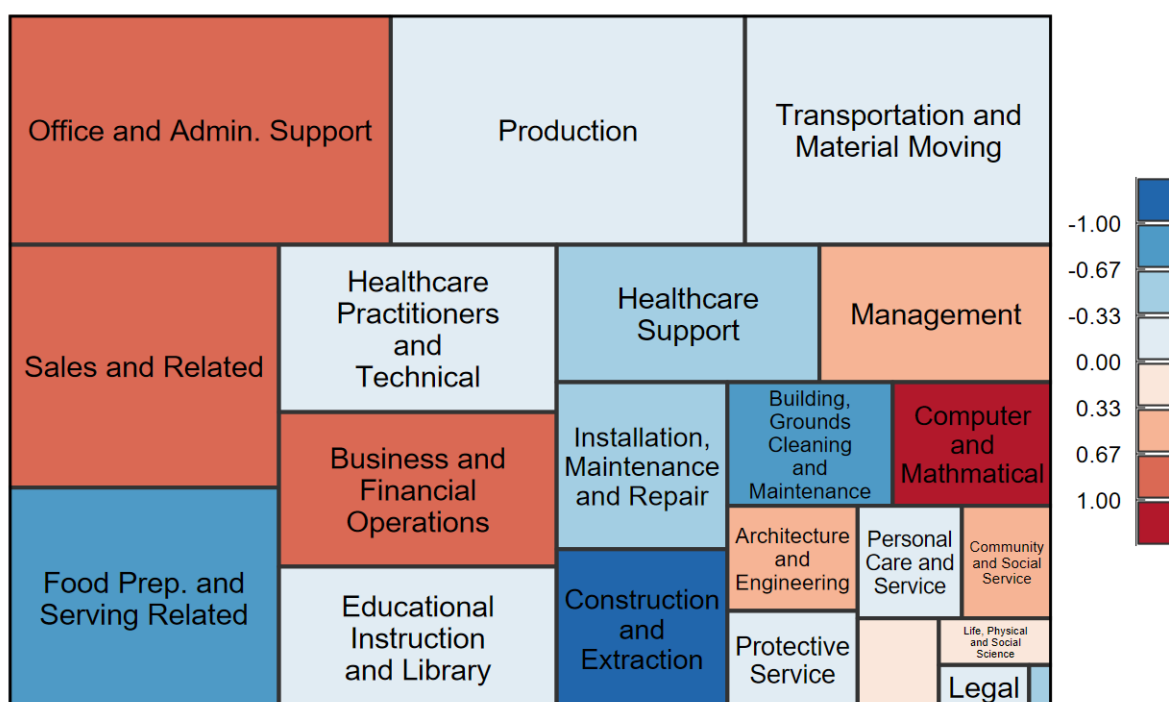


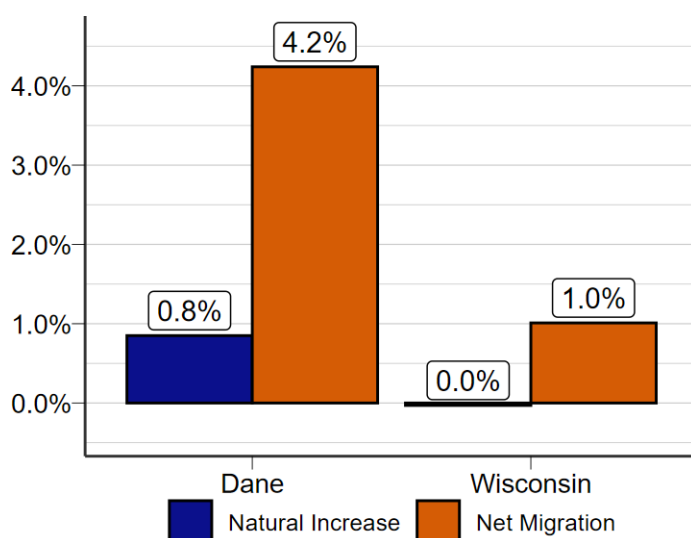
Figure 7: AI exposure per occupation group by number employed.

Fundamental changes are in store for Wisconsin's economy due primarily to two new influencers: workforce constraints and artificial intelligence technology. The degree to how each will affect the other and the whole is yet to be determined.

Population and Demographics

	2020 Census	2023 Final Estimate	Numeric Change	Percent Change
Madison, City	274,686	286,785	12,099	4.4%
Sun Prairie, City	35,967	38,387	2,420	6.7%
Fitchburg, City	30,999	34,019	3,020	9.7%
Middleton, City	21,827	23,476	1,649	7.6%
Waunakee, Village	14,879	16,165	1,286	8.6%
Verona, City	14,030	15,553	1,523	10.9%
Stoughton, City	13,173	13,172	-1	0.0%
Oregon, Village	11,179	11,940	761	6.8%
DeForest, Village	10,811	11,674	863	8.0%
Windsor, Village	8,754	9,758	1,004	11.5%
Dane, County	561,504	590,056	28,552	5.1%
Wisconsin, State	5,893,718	5,951,400	57,682	1.0%

Dane County is the second most populous county in Wisconsin with 590,056 residents. It is also the state's second fastest-growing county. From 2020 to 2023, the population grew by 5.1%, significantly faster compared to the 1.0% change in Wisconsin. Demographically, Dane County is centered around the city of Madison, which makes up almost half of the county's population. Madison serves as the metropolitan center not only for Dane County, but many of the surrounding counties.



Components of Population Change

Population change is driven by natural increase and migration. Natural population increase occurs when there are more births than deaths, while migration increases when more people move into the county than leave. Natural increase is primarily influenced by the population's age structure, while migration has a more immediate and actionable impact on the county labor force.

Figure 8: Source: WI Department of Administration.

The fastest-growing municipality in Dane County is the Village of Windsor, which added 1,004 people, for a 11.5% growth rate. Fitchburg and Verona are the second- and third-fastest growing municipalities in the county. All these municipalities are suburbs of the Madison metropolitan area. This growth is likely due to housing availability outside of Madison while still having close access to the city's amenities and employment opportunities.

Dane County's population growth in terms of natural increase was 0.8%, ranking third in the state. Net migration was 4.2%, ranking second in the state. As one of the fastest-growing counties, Dane County has been able to attract residents with its large and quickly growing economy in industries like health care, scientific research, insurance and computer software. These residents appear to be staying and starting families, as Dane County's rate of natural increase is also substantially higher than the state's.

Population Projections

	2020	2030	2040	2050	2020-2050 Population Change
Dane	561,504	627,215	703,535	779,265	38.8%
Wisconsin	5,893,718	5,890,915	5,841,620	5,710,120	-3.1%

Source: Demographic Services Center, Wisconsin Department of Administration.

According to the prediction by the Wisconsin Department of Administration's Demographic Services Center, Dane County is predicted to increase by 38.8% from 2020 to 2050, the fastest rate of growth for any Wisconsin county. This is evidence for Dane County's growing economy and its destination as a place to live. However, while this predicted growth is a positive sign for Dane County's labor market, it may lead to growing pains in housing.

Employment by Industry

	2023 Avg Monthly Employment	5-year Change	5-year % Change	% of Total Employment
Total, All Industries	353,099	16,871	5.0%	100.0%
Education and Health Services	96,595	11,248	13.2%	27.4%
Trade, Transportation, and Utilities	53,259	-699	-1.3%	15.1%
Professional and Business Services	46,833	-2,718	-5.5%	13.3%
Leisure and Hospitality	34,453	804	2.4%	9.8%
Manufacturing	26,925	2,425	9.9%	7.6%
Financial Activities	22,589	614	2.8%	6.4%
Public Administration	21,611	191	0.9%	6.1%
Information	19,480	3,492	21.8%	5.5%
Construction	17,796	1,522	9.4%	5.0%
Other Services	11,006	-332	-2.9%	3.1%
Natural Resources and Mining	2,553	324	14.5%	0.7%

Source: Quarterly Census of Employment and Wages, Bureau of Labor Statistics.

Dane County employment added 16,871 jobs (5.0%) from 2018 to 2023. Average employment levels were at 353,099 jobs in 2023. The largest industry was education and health services, accounting for 27.4% of employment in the county in 2023. While education and health services are often a large portion of employment – this industry accounts for 22.4% statewide – the county has a noticeably higher share of employment in this industry. Madison is home to the University of Wisconsin’s flagship campus as well as its associated hospital system. The hospital subsector added the most jobs of any subsector, growing by 4,345 jobs over this period.

The information industry is the fastest growing in Dane County, adding 3,492 jobs for a 21.8% growth rate from 2018 to 2023. Dane County is an outlier compared to the state, where the information industry slightly declined slightly at a rate of 0.3%. One of the biggest employers in this industry is Epic Systems, a national leader in software for healthcare systems. This industry can take advantage of the county’s relatively highly educated workforce.

Unemployment

Dane County's monthly average unemployment rate in 2023 was 2.3%, compared to the state's rate of 3.0%. Dane County has the lowest rate of unemployment in the state and has consistently had a significantly lower rate than the state overall.

This low unemployment rate is partially driven by the level of educational attainment in Dane County; there is a known negative correlation between unemployment and educational attainment. A full 53.9% of its residents aged 25 and older have a bachelor's degree or higher, much higher than the 33.8% for Wisconsin overall, according to the Census Bureau American Community Survey 1-Year, 2023.

i Unemployment Rate

The unemployment rate is the percentage of people who are not working but actively looking for work compared to the total number of people in the labor force.

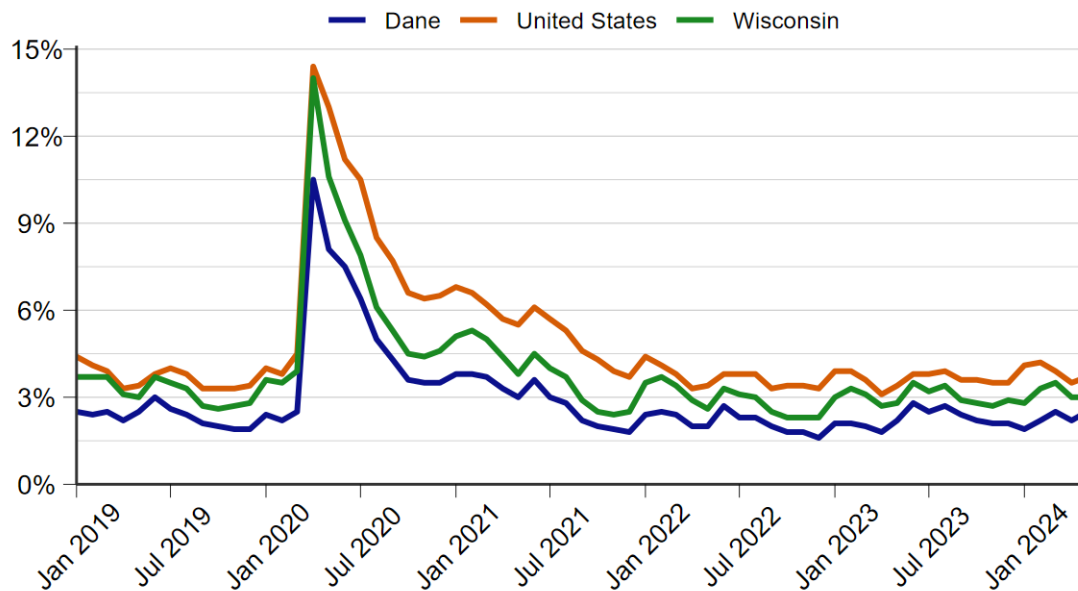


Figure 9: Source: Local Area Unemployment Statistics (LAUS), Bureau of Labor Statistics.

Labor Force Participation

Dane County's labor force participation rate (LFPR) was 69.8%, ranking seventh in the state in 2023. The higher labor force participation rate is likely driven by the county having a younger labor force than the state. However, the county faces the same downward trend in LFPR as the state. Dane County may be younger than the state overall, the population is still aging. With its strong level of net migration, the county may be able to ameliorate some of the workforce shortages which come with an aging population.

i Labor Force Participation Rate

The labor force participation rate (LFPR) looks at the relative labor resources available and is expressed as the percentage of the civilian noninstitutional population 16 years and older that is working or actively looking for work.

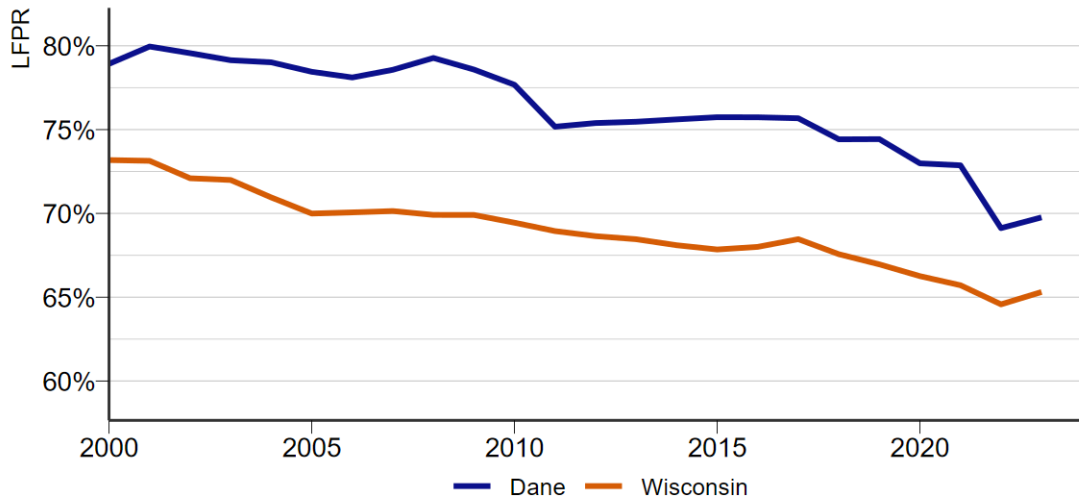


Figure 10: Source: WI Department of Workforce Development Office of Economic Advisors.

AI Impact

Occupation	Employment	% of Total Employment	AI Exposure Index
Fast Food and Counter Workers	11,110	2.3%	-1.00
Retail Salespersons	10,730	2.2%	0.40
Cashiers	10,680	2.2%	0.89
Registered Nurses	10,320	2.2%	0.04
Customer Service Representatives	8,830	1.8%	0.75
Laborers and Freight, Stock, and Material Movers, Hand	8,700	1.8%	-0.78
Office Clerks, General	7,700	1.6%	1.00
Stockers and Order Fillers	7,360	1.5%	-0.05
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	7,010	1.5%	-1.27
Waiters and Waitresses	6,160	1.3%	-0.78

Source: Governor's Task Force on Workforce and Artificial Intelligence.

AI Exposure

AI exposure, as computed by the Governor's Task Force on Workforce and Artificial Intelligence, is the median value across four different research paper's measures of exposure after normalizing each paper's measure to the same mean and variance. A positive value of AI exposure indicates placement in the top 50% of occupations for AI exposure, with higher values indicating greater exposure to AI. Conversely, negative numbers indicate exposure in the bottom 50%. For more information about AI exposure, refer to The Governor's Task Force on Workforce and Artificial Intelligence Advisory Action Plan (dwd.wisconsin.gov/ai-taskforce/pdf/ai-advisory-action-plan.pdf)

Dane is part of the South Central WDA, which also includes Columbia, Dodge, Jefferson, Marquette, and Sauk counties. The largest occupation in the South Central workforce development area is fast food and counter workers, accounting for 2.3% of the area's employment. This occupation has an artificial intelligence exposure index of -1.00. For context, the occupation with the highest potential AI exposure is bookkeeping, accounting, and auditing clerks, with an AI exposure index of 1.89.

Unlike other waves of automation, these generative AI tools can affect knowledge workers more than others. Dane County has a higher share of these types of workers, as evidenced by the size of industries like financial activities; professional and business services, and information. For example, software developers represent the seventh largest occupation, which has a significantly high AI exposure index of 1.27. As these AI tools can seamlessly integrate into most of a software developer's tasks, they are a prime example of an occupation which will likely be affected by AI.

Industry Employment Projections

	Industry	2022 Employment	2032 Projected Employment	Employment Change 2022-2032	% Change 2022-2032
Highest Percent Growth	Information	17,853	21,530	3,677	20.6%
Most Jobs Added	Professional and Business Services	56,016	63,379	7,363	13.1%
Highest Number Employed	Education and Health Services	119,801	126,968	7,167	6.0%
Lowest Percent Growth	Government	36,633	37,319	686	1.9%
Total	Total All Industries	527,186	568,717	41,531	7.9%

Source: WI Department of Workforce Development Office of Economic Advisors.

DWD conducts employment projections for Wisconsin's 11 WDAs every two years. Employment in South Central WDA is expected to increase by 41,531 (7.9%), slightly faster than the state's growth rate of 7.1%.

In the South Central WDA, the information industry is projected to grow at a rate of 20.6% from 2022 to 2032, making it the fastest growing sector. While much of the employment in the information industry is driven by the healthcare software developer Epic Systems, other software developers and publishers in the area are contributing to this growth. Despite not being the fastest-growing industry, professional and business services is expected to add the most jobs in the region. This points to the growing importance of these highly technical and professional industries to the area. In contrast, manufacturing is projected to grow by 4.7% by 2032, putting it at a slower rate than the area as a whole.

For more information and detailed projections results for both occupations and industries, view the WisConomy projections page (jobcenterofwisconsin.com/wisconomy/pub/projections).

Occupation Employment Projections

	Occupation	2022 Employment	2032 Projected Employment	Employment Change 2022-2032	% Change 2022-2032
Highest Percent Growth	Computer and Mathematical	23,528	27,764	4,236	18.0%
Most Jobs Added	Computer and Mathematical	23,528	27,764	4,236	18.0%
Lowest Percent Growth	Legal	3,481	3,391	-90	-2.6%
Highest Number Employed	Office and Administrative Support	63,491	62,767	-724	-1.1%
Total	Total, All	527,186	568,717	41,531	7.9%

Source: WI Department of Workforce Development Office of Economic Advisors.

Overall employment in the South Central WDA is projected to increase by 41,531, growing at a rate of 7.9%. In the South Central WDA, computer and mathematical occupations are projected to be the fastest growing, increasing at a rate of 18.0% from 2022 to 2032. This gain is driven by the growing information industry in the region as well as the high pay for computer-related occupations and the increasing demand for software-driven business solutions. In addition, the South Central area has a concentration of employers in highly technical industries, like biotechnology or computer systems. These employers take advantage of the highly educated people coming out of the area's colleges. This is also exemplified by the second-fastest growing occupation group: life, physical and social sciences.

While computer and mathematical occupations added the most jobs, a shrinking occupation group can still provide occupational opportunities. For example, total employment in administrative and support occupations are projected to decline. Despite this overall decline, there will still be significant demand to fill positions in that occupation, primarily driven by labor force exits and occupational transfers. This occupations group is projected to have the second-most annual number of openings, with 7,040 openings annually.

Aging Population

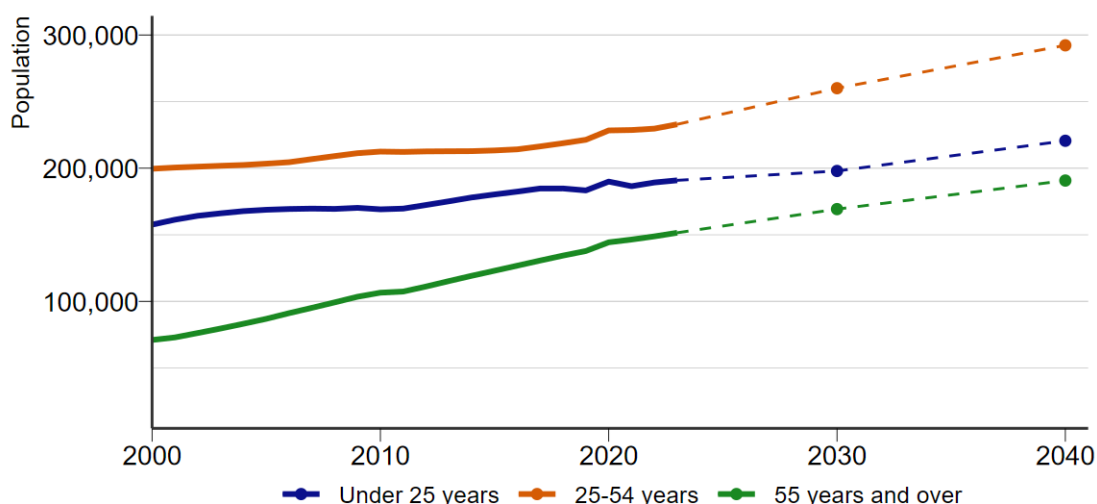


Figure 11: US Census Bureau, Population Estimates Program and WI Department of Administration, Demographic Services Center.

Dane County is relatively young. From 2017 to 2022, the median age in Dane County was 35.5, compared to Wisconsin's median age of 39.9. Although Dane County is young compared to the state, the population is still growing older. The share of the population age 55 and older was 26.3% in 2023, growing from 22.9% in 2013.

Wisconsin faces a rapidly aging population, which affects communities by reducing the labor force, increasing demand for health care, and raising the number individuals relying on transfer payments. While these issues are not as urgent for Dane compared to other counties, these demographic shifts present challenges and opportunities for policy and workforce planning.

Personal Income

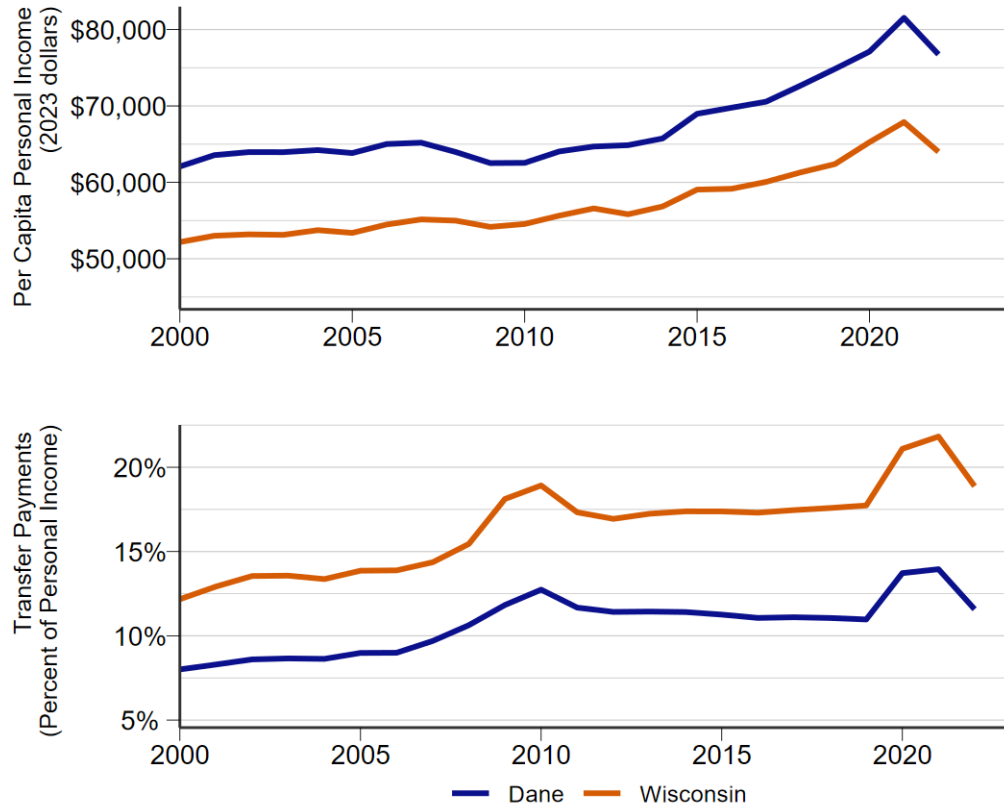


Figure 12: Source: United States Bureau of Economic Analysis.

i Personal Income

Personal income includes income from all sources, such as wages, business income, rental income, investments, and government transfer payments. It excludes capital gains or losses, whether realized or unrealized. All dollar amounts are adjusted for inflation using 2023 dollars.

The per capita personal income in Dane County was \$76,749 in 2022, compared to the statewide average of \$63,996. This has consistently been higher than the state overall; the county has a relatively high concentration of well-paid occupations, like registered nurses or software developers. However, Dane County also has a higher cost of living than the state. For example, a family of two adults, one infant and one school-age child, requires an annual wage of \$92,557 to meet adequate standards, according to The Self-Sufficiency Standard for Wisconsin 2023. These high costs, especially childcare and housing, can act as barriers to employment for some residents, especially mothers.

The percent of income coming from transfer payments can be an indicator of the age of the popu-

lation. In total, 11.6% of the county's personal income came from transfer payments as opposed to earned income in 2022. This is noticeably lower than the state, likely a result of the county's relatively lower age. As individuals age, they become eligible for transfer payments from the government, like Social Security. Additionally, transfer payments from programs like Unemployment Insurance can help automatically stabilize the economy during downturns.

Workforce Pipeline

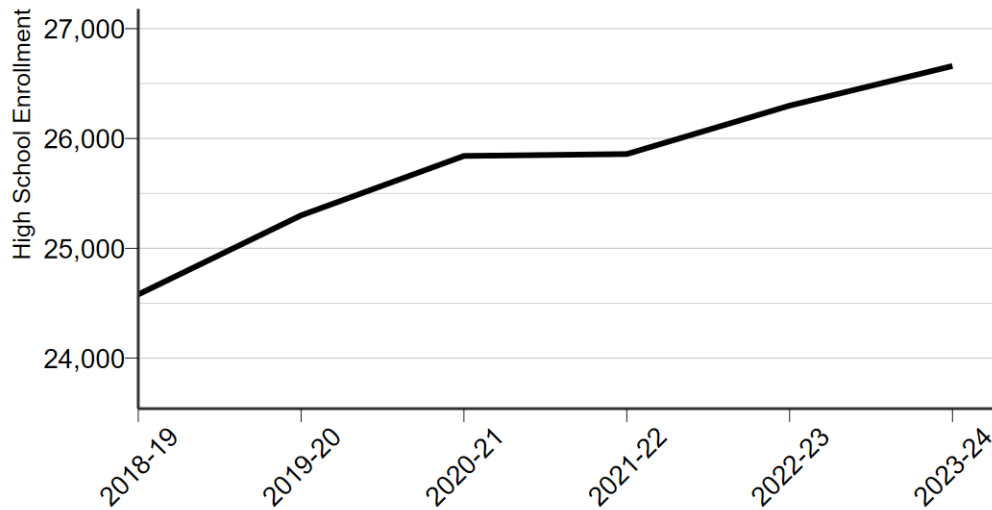


Figure 13: Source: Wisconsin Department of Public Instruction.

Education prepares the next generation of the labor force. As of the 2023-24 school year, 26,660 students were enrolled in grades 9-12. This includes public, private, and home-based schools. County-level totals are determined by the reported enrollment of school district whose main office is located in that county. As school district borders do not necessarily align with county borders, the numbers below may not match the total number of students residing in the county.

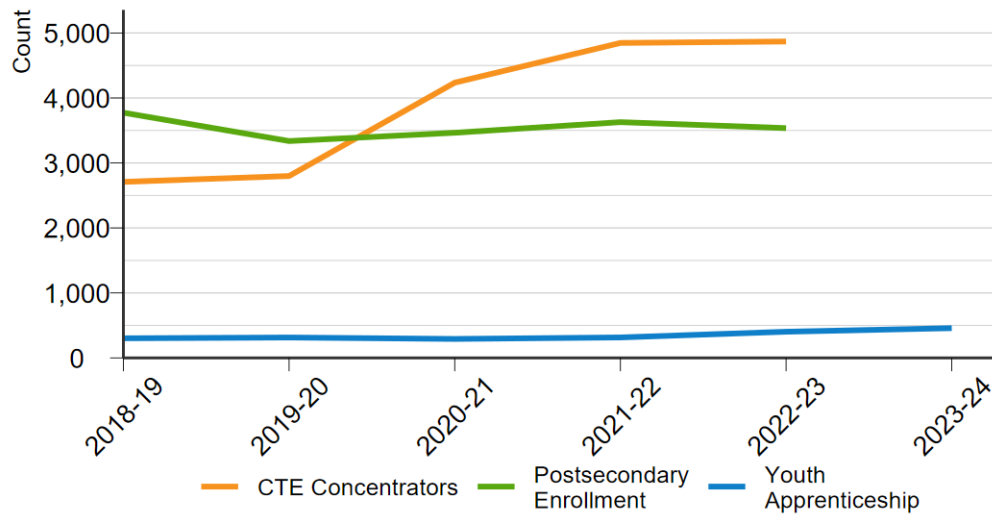


Figure 14: Source: Wisconsin Department of Public Instruction and Department of Workforce Development.

Career and Technical Education

Of those attendees, 36.0% were concentrators in career and technical education (CTE), compared to 44.3% for the state during the 2022-23 school year. Participation in CTE has increased dramatically since the 2018-2019 school year. However, as a percentage of eligible students, Dane County has a lower rate of CTE concentrators than Wisconsin overall.

Health and human science is an apt career cluster for CTE concentrators. The Madison metropolitan area, already well-known for its hospital systems, was recently awarded a grant from the U.S. Economic Development Administration to help develop a biohealth tech hub.

i Career and Technical Education

Career and technical education (CTE) equips students for both the workforce and postsecondary education through work-based learning opportunities. CTE concentrators are 11th and 12th graders who have passed at least two CTE courses within a specific career pathway. Home-based students are not included in this data.

	CTE Concentrator	Percent of Grade 11 and 12
Dane	4,869	36.0%
Wisconsin	64,124	44.3%

School year 2022-23. Source: Wisconsin Department of Public Instruction.

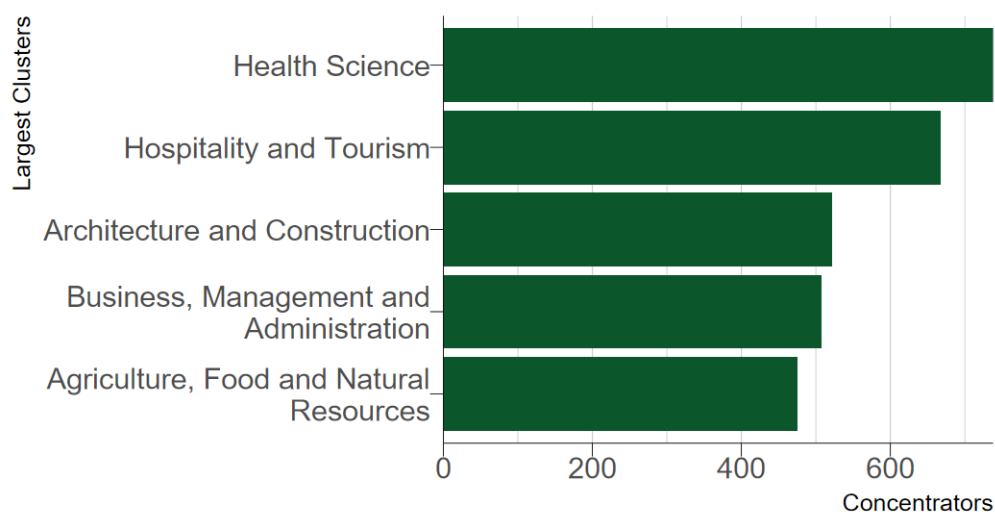


Figure 15: School year 2022-23. Source: Wisconsin Department of Public Instruction.

Postsecondary Enrollment

The percentage of high school completers who went on to enroll in a postsecondary institution as a percentage of all 12th grade students in 2022-23 was 50.1%. In Wisconsin, it was 43.6%. Dane County has a plethora of nearby postsecondary institutions for prospective students to choose

from. In addition to this convenient access, Dane County has more employment opportunities in industries where higher education is required, like information or healthcare.

i Postsecondary Enrollment

Postsecondary enrollment tracks the percentage of high school graduates who attend a postsecondary school (public or private colleges, two- or four-year universities, technical colleges, or training programs) in the fall immediately following graduation. It is important to note that this data may slightly underrepresent actual enrollment due to limitations in how information is matched within the National Student Clearinghouse.

	Postsecondary Enrollment	Percent of Grade 12
Dane	3,536	50.1%
Wisconsin	31,893	43.6%

School year 2022-23. Source: Wisconsin Department of Public Instruction.

Youth Apprenticeship

Youth apprenticeship is a program that prepares participants for the workforce through direct, hands-on work experience. There were 403 youth apprentices in Dane County in the 2022-23 school year. Dane County's rate of participation in youth apprenticeship is lower than the state overall. There might be an impression of apprenticeship as a path primarily for trades and manufacturing, but youth apprenticeship is available for a wide variety of occupations and industries. Most youth apprentices in the county are in the health sciences, a natural fit for the large and growing healthcare and biotech industries in this area.

i Youth Apprenticeship

Youth Apprenticeship (YA) Program is a school-supervised program that combines work and classroom learning to help high school students prepare for a career. Participants receive on-the-job training directly from the employer. The program helps students explore career paths and helps employers develop a qualified workforce.

	Youth Apprenticeship Participants	Percent of Grade 11 and 12
Dane	403	3.0%
Wisconsin	8,222	5.7%

School year 2022-23. Source: Wisconsin Department of Workforce Development.