

Q1 2017
January - March

SOUTHEAST MICHIGAN

WIN Labor Market Report





Introduction: Southeast Michigan (WIN 16-County Region)

About This Report

The Workforce Intelligence Network for Southeast Michigan (WIN) partnership is a collaboration of six Michigan Works! Agencies (MWAs) and ten community colleges across a 16-county region in Michigan. The counties in the WIN partnership include: Genesee, Hillsdale, Huron, Jackson, Lapeer, Lenawee, Livingston, Macomb, Monroe, Oakland, Saint Clair, Sanilac, Shiawassee, Tuscola, Washtenaw, and Wayne, along with the City of Detroit.

This report highlights labor market information and real-time job posting data for the WIN Region as a whole with special sections devoted to 11 occupational groups. WIN's analysis of online job postings, a proxy for employer demand, is a pioneering method for tracking the health of the labor market.

Occupational groups include:

- Agriculture (page 7)
- Business & Finance (page 12)
- Construction (page 17)
- Customer service (formerly retail & hospitality) (page 22)
- Education (page 27)
- Energy (page 32)
- Engineers & designers (manufacturing focused) (page 37)
- Health care (page 42)
- Information technology (page 47)
- Skilled trades & technicians (manufacturing focused) (page 52)
- Transportation, distribution, and logistics (TDL) (page 57)

Data analyzed includes:

- Employer demand
- Top posting jobs
- In-demand credentials, degrees, and skills
- Educational attainment required
- Wages offered in job postings
- Employment
- Unemployment
- Labor force

State of the Labor Market in the WIN 16-County Region

Quarter one of 2017 (Q1 2017, January through March) represented a series of milestone highs as the economy continued to emerge from the recent great recession. Since January 2010, when the recession was at its deepest (the trough), the WIN 16-county region recovered 295,881 jobs. In Q1 2017, the total number of jobs held reached 2.62 million workers.

Q1 2017 postings reached a new relative high, despite the recent fall in employment from Q4 2016. The growth in online advertisements could indicate an increase in labor demand, and thus a chance for employment to rebound next quarter. Job postings in Q1 2017 were 14 percent higher than in Q4 2016, increasing by 19,215. Between Q4 2016 and Q1 2017, employment in the region fell, with a loss of 7,815 workers. Despite this drop, the labor force increased by 12,331 individuals during this time frame. With the drop in employment and simultaneous increase in the labor force, the number of unemployed individuals increased in the region. A total of 20,146 individuals identified as unemployed in Q1 2017. These changes brought the unemployment rate to 5.5 percent for Q1 2017.

Historically, the first quarter of a year tends to be the lowest point for employment, while Q2 is typically a time when employment begins an annual surge that continues through Q4. With the large number of postings during Q1 2017, hiring may increase in Q2 2017, resulting in an increase in employment that follows similar traditional cyclical trends.



Introduction: Southeast Michigan (WIN 16-County Region)

Key Findings for Q1 2017

Labor force increased moving into Q1 2017.

Moving into the new year, the labor force expanded by 12,331 individuals. With the labor force increase, employment fell by 7,815 workers, with many of these workers most likely moving into unemployment. Despite these changes the unemployment rate rose to only 5.5 percent, which remains lower than previous years. (See page 3).

Despite the overall drop in employment, nearly all occupation groups reported increases in employment between 2016 and 2017.

Moving into 2017, each occupation group, except for education, witnessed an increase in employment. These increases paired with higher demand indicates that the labor market is strengthening in the region, with a few occupation groups reporting new high points in employment in 2017. The labor market continues to recover and improve from the recessionary period the country faced.

Online job ads increased by 13.6 percent through Q1 2017 to a new relative high.

Most occupation groups witnessed an increase in postings during Q1 2017. With these increases, the total postings for the region surpassed 160,000 postings a new high for employer demand. (See page 3).

Lucrative opportunities available to job seekers in Engineering and Design and IT group .

Both the Engineering and Design occupation group and IT occupation group offered higher-than-average advertised salaries when compared to the other groups. The Engineering and Design occupation group average advertised salary was about \$80,000 per year, while the IT group offered slightly higher average wages at nearly \$90,000 per year. Those willing to overcome the education barriers in these fields can expect high potential earnings.

Entry-level opportunities available throughout the region.

Most postings throughout the region were open to candidates with entry-level experience. These postings indicated that applicants with zero to two years of previous work experience qualified for the opening. While some technical groups such as Engineers and Designers, IT, Construction, and Business and Finance sought applicants with three to five years of experience, these groups still had a high number entry-level openings available.

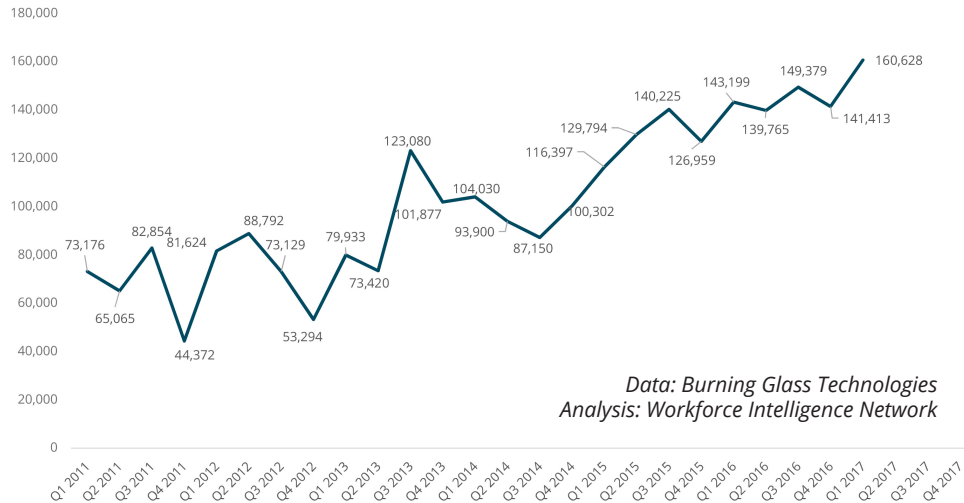


Executive Summary

Postings Over Time

Between Q4 2016 and Q1 2017, online job postings increased from 141,413 in Q4 2016 to a new relative high of 160,628 in Q1 2017. This is a 13.6 percent increase with the region adding 19,215 job ads between the two quarters. Compared to one year prior, Q1 2016, postings were 12 percent higher (17,429 additional postings in Q1 2017 compared to Q1 2016). Moving into 2017, the general trend is positive with postings reaching a new high point within the past seven years.

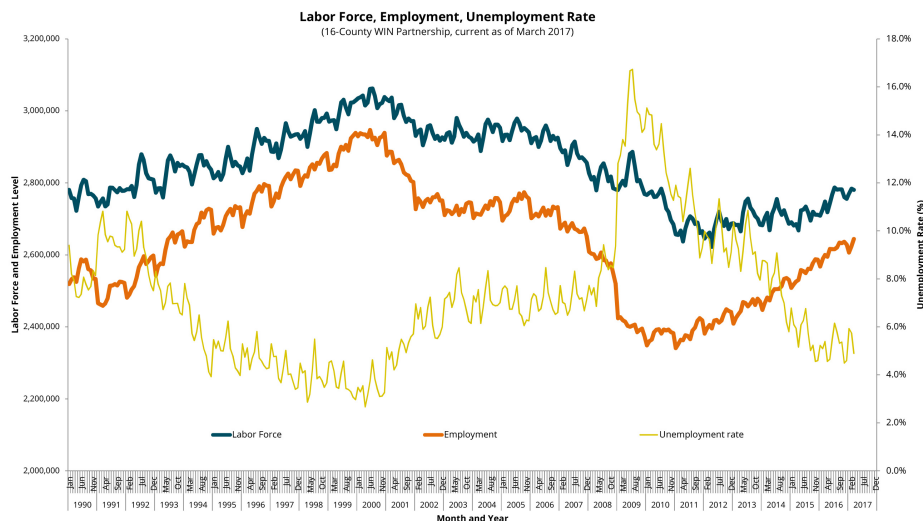
WIN Region Online Job Postings



Labor Force, Employment, and Unemployment

Between Q4 2016 and Q1 2017, employment in the region fell 0.3 percent, with a loss of 7,815 workers. Despite the drop in employment, the labor force increased by 12,331 individuals (0.4 percent) during this timeframe. With the drop in employment while the labor force increased, the number unemployed individuals increased in the region. A total of 20,146 individuals identified as unemployed this quarter. These changes brought the unemployment rate to 5.5% for Q1 2017.

Labor Force, Employment, Unemployment Rate Quarter 1 2017



Data: BLS
Analysis: Workforce Intelligence Network



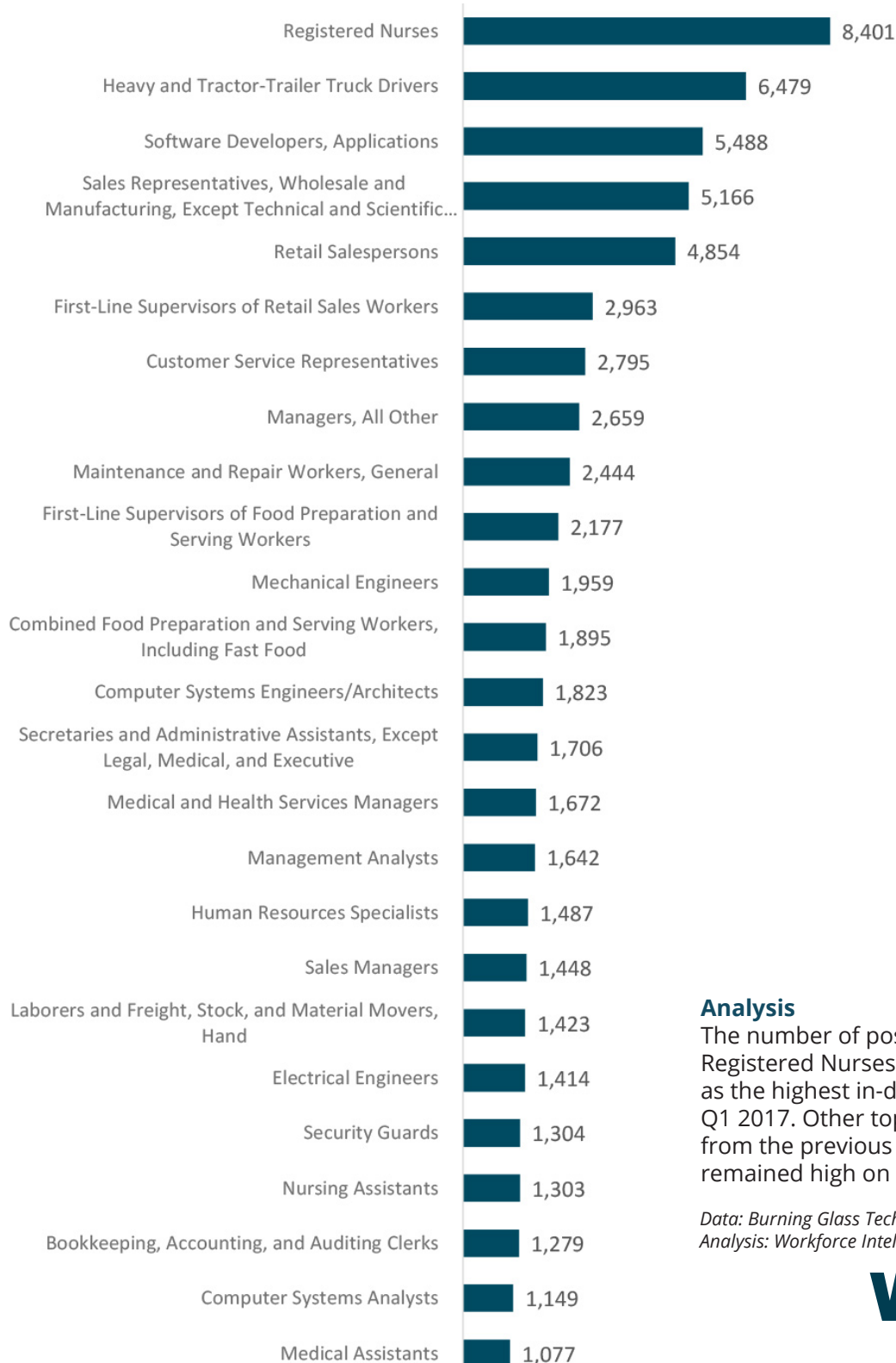
Top Job In-Demand: Registered Nurses

5.5%

unemployment rate in Q1 2017

Top Jobs Posted

Quarter 1 2017



Analysis

The number of postings for Registered Nurses retained the spot as the highest in-demand job during Q1 2017. Other top in-demand jobs from the previous quarters remained high on the list.

Data: Burning Glass Technologies

Analysis: Workforce Intelligence Network





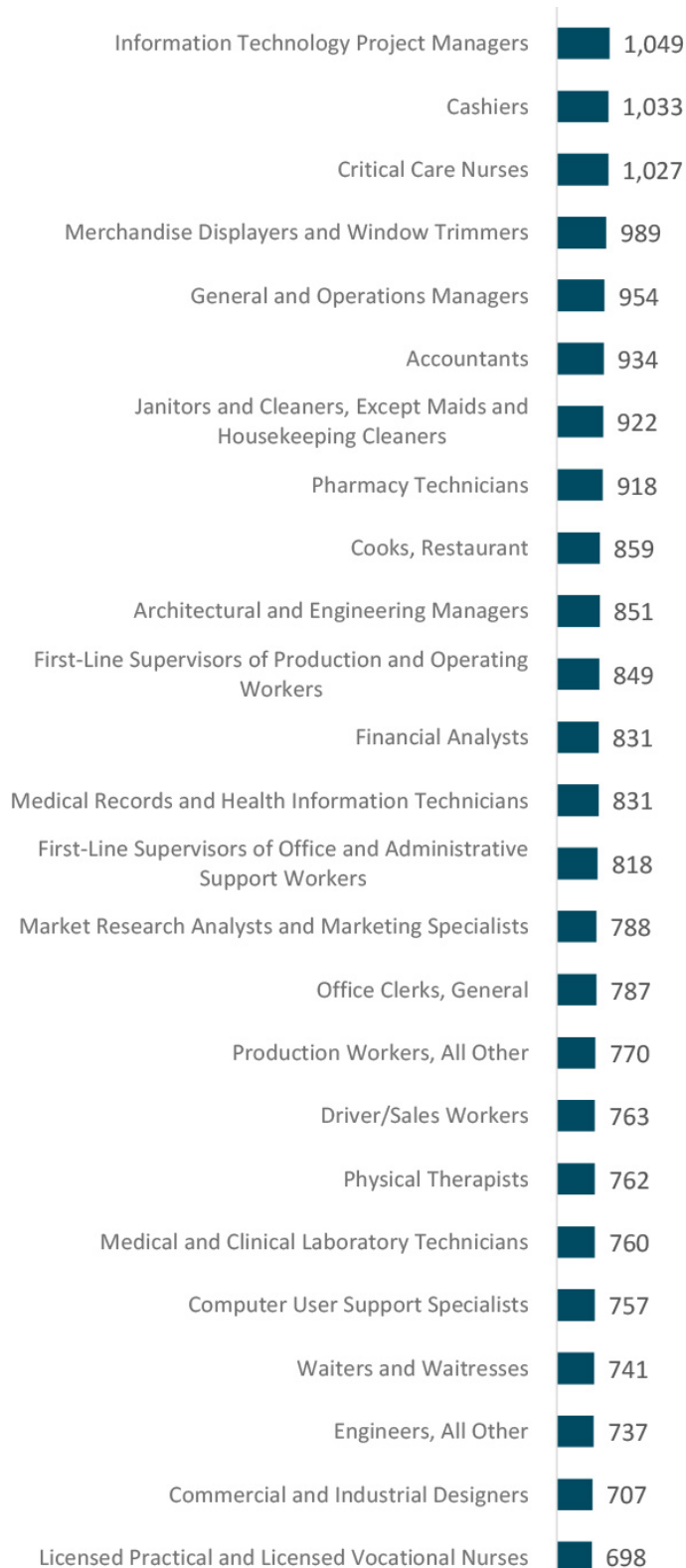
New high of 160,268 total
postings



Labor force increased by 0.4%
between Q4 2016 and Q1 2017

Top Jobs Posted

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

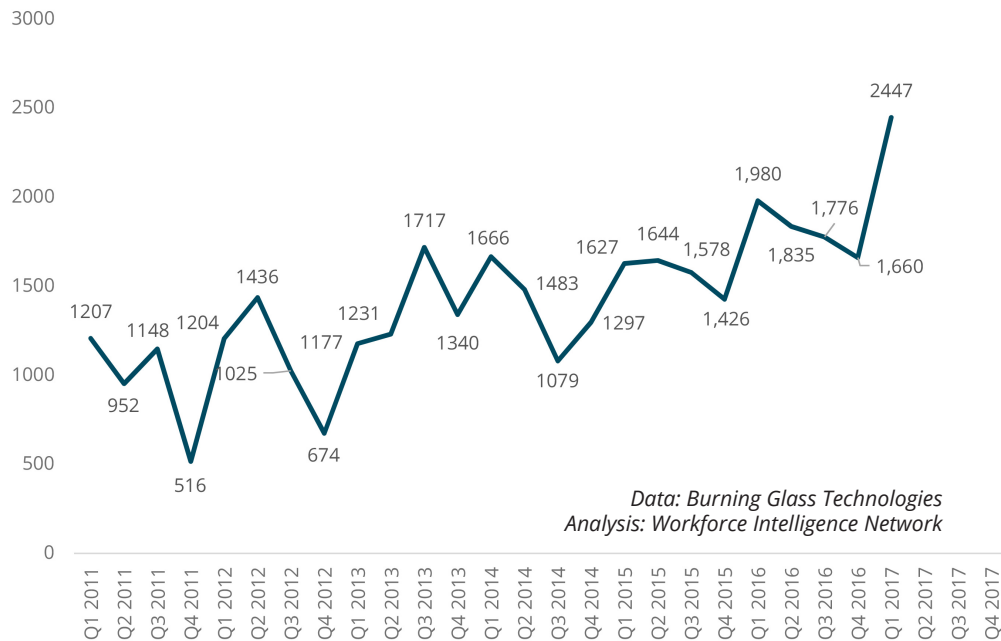
Introduction

WIN's Agriculture group brings together occupations that require knowledge of the farming, livestock, the environment, and natural sciences. Occupations range from farm workers, to environmental engineers, to meat butchers, and recreation workers.

Job Posting Analysis

Job postings for Agriculture - related occupations increased 47 percent, increasing by 787 from 1,660 in Q4 2016 to 2,447 in Q1 2017. Postings are 23 percent above levels from Q1 2016, one year prior to this report's analysis.

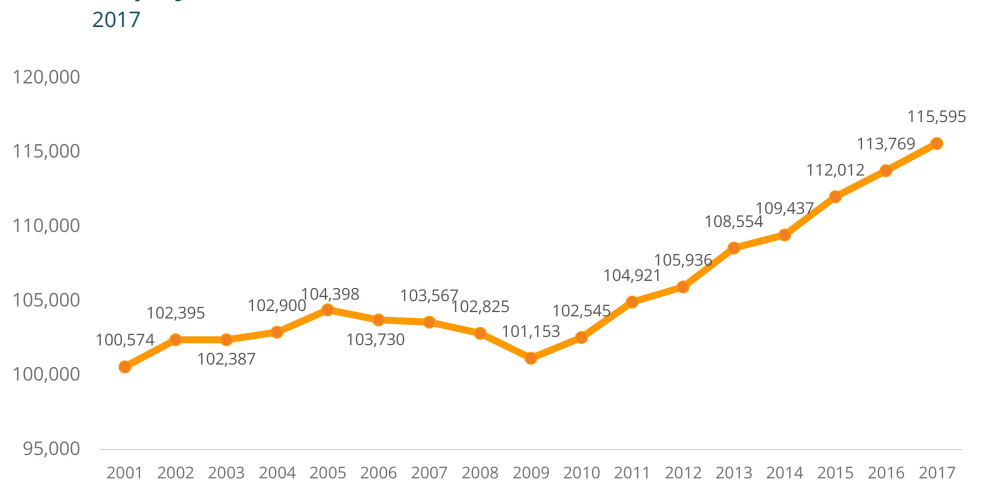
Online Job Postings



Employment Analysis

Agriculture employment has been growing rapidly and has surpassed pre-recession job level peaks by over 10,000 workers. While the Great Recession hit many industries, Agriculture was able to maintain its employment well and regain jobs to pre-recession employment by 2012.

Employment Over Time



Data: EMSI
Analysis: Workforce Intelligence Network

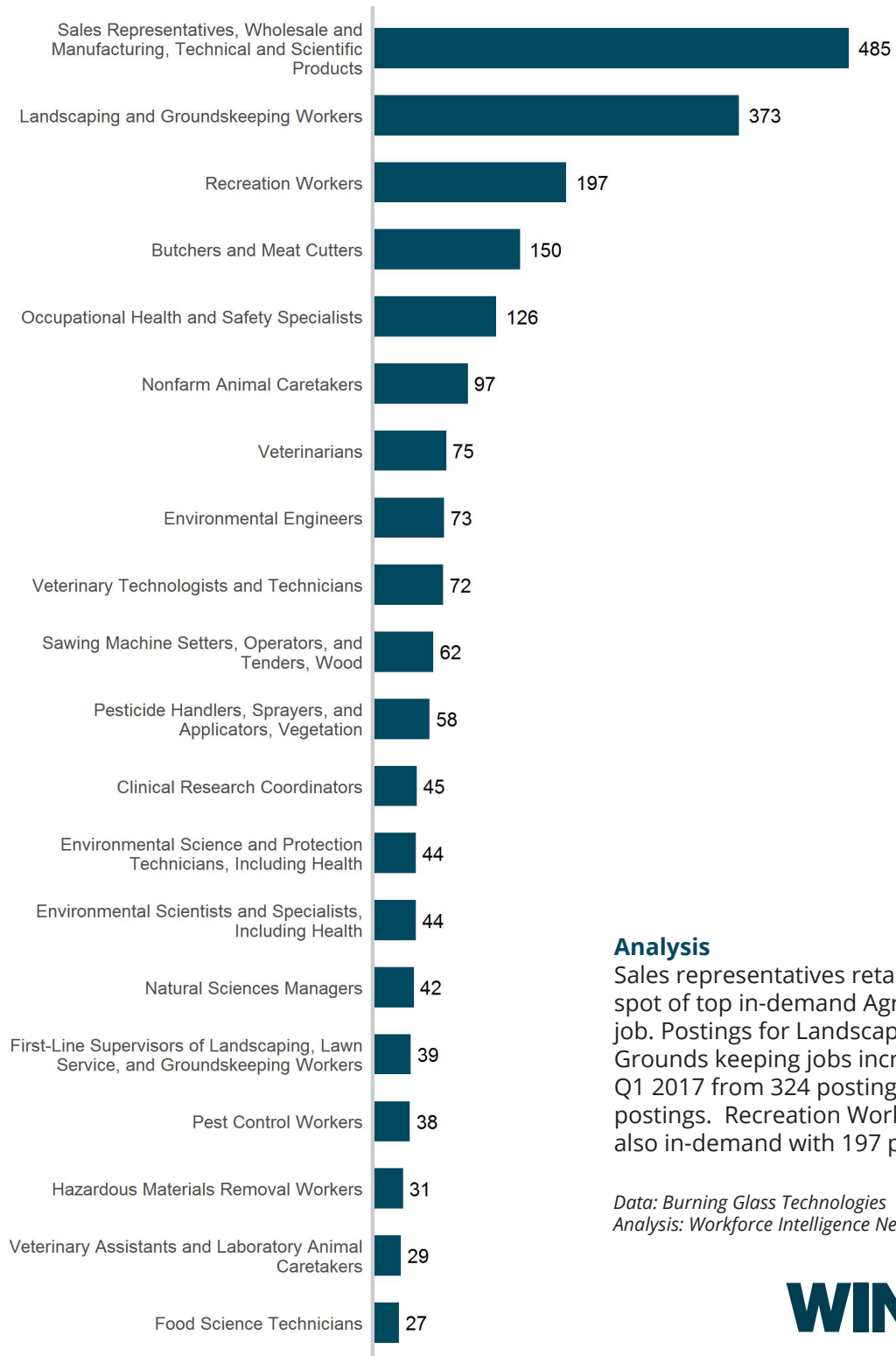


Entry Level Openings Available



Total of 2,447 jobs posted

Agriculture Top Jobs Posted Quarter 1 2017



Analysis

Sales representatives retained the spot of top in-demand Agriculture job. Postings for Landscaping and Grounds keeping jobs increased in Q1 2017 from 324 postings to 373 postings. Recreation Workers were also in-demand with 197 postings.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Technical sales:
top in-demand job



Most jobs require training or
Bachelor's degree

Agriculture Educational Attainment Required

Most Agriculture jobs require vocational training or a bachelor's degree with little in between. This is because most jobs are focused on skilled labor (vocational training) or technical sales and management (bachelor's degree).

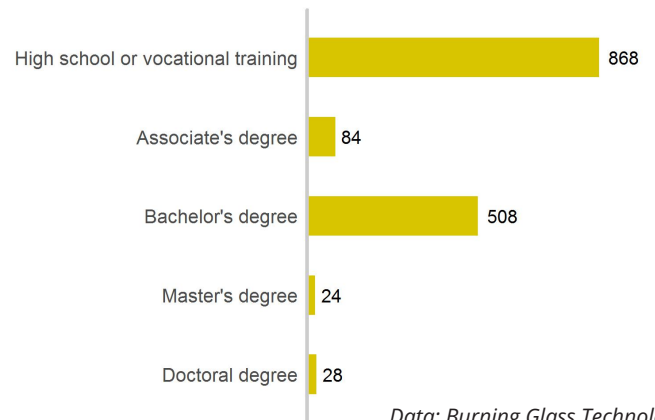
Of the postings that listed required experience, most require five years or less. Over 50 percent of these postings advertised 0 to 2 years of experience required indicating a large volume of entry-level jobs available.

In-demand degrees for workers interested in Agriculture range from engineering to business to environmental science. A wide variety of areas of study prepare a person for these careers.

In-Demand Areas of Study

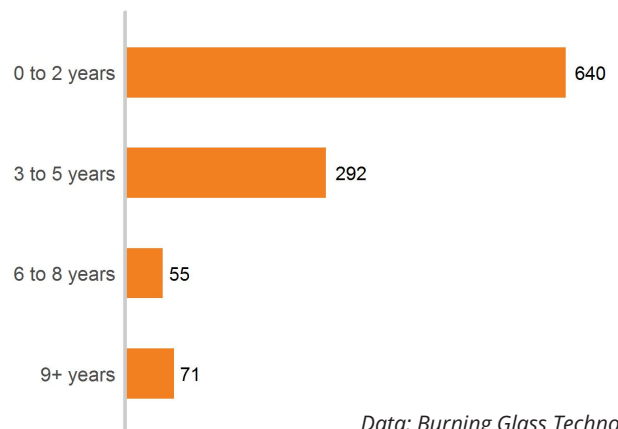
- Engineering, General
- Business Administration and Management
- Environmental Health
- Mechanical Engineering
- Environmental/Environmental Health Engineering

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Over 115,000 Agriculture
Workers



Over half of available
Agriculture jobs are full-time

Agriculture In-Demand Skills

Q1 2017 postings required a wide variety of skills ranging from more technical (inspection, use of fertilizers, occupational health and safety) to foundational skills that every worker needs such as communications, problem solving, and customer service. Supervisory skills were also in demand showing demand for managers. Many Agriculture jobs also include an element of physical demand.

Technical In-Demand Skills

- Sales
- Customer Service
- Inspection, Repair
- Microsoft Office
- Labeling

Foundational In-Demand Skills

- Communication Skills
- Writing/ Planning
- Organizational Skills
- Ability to perform physical tasks
- Problem Solving

Job Type

- Full Time- 61.1%
- Part Time- 5.1%
- Temp- 13.7%

Certifications Required

- Commercial Driver's License
- Veterinary Technician
- Pest Control Applicator
- Certified Hazardous Materials Manager
- Certified Safety Professional



Average advertised wage:
\$45,943



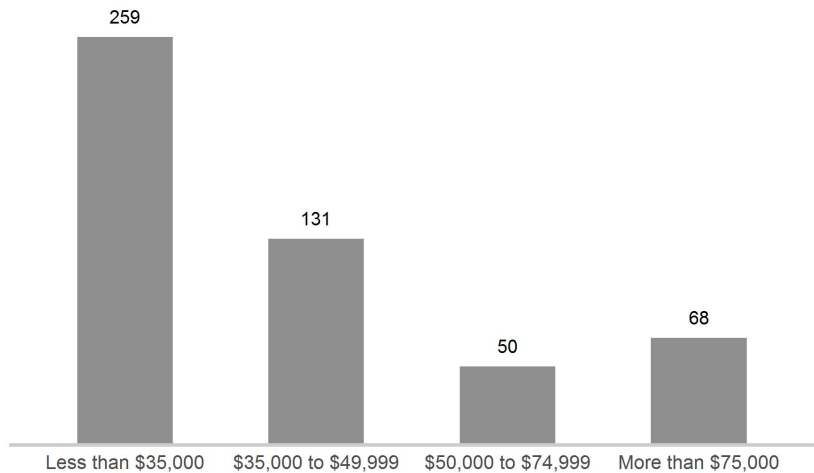
CDL and Vet Tech
Certifications in-demand

Agriculture Wages

Many Agriculture jobs start with wages below \$35,000, especially those that do not require experience or a degree. However, many jobs offer wages much higher. The average wage advertised in postings during Q1 2017 was \$45,943 a decrease from \$52,783 during Q4 2016. Of the top ten in-demand occupations, half reported median salaries of over \$60,000 per year.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$21.61	\$27.46	\$37.97	\$52.59	\$68.37
37-3011	Landscaping and Groundskeeping Workers	\$9.02	\$10.00	\$11.35	\$13.87	\$17.05
39-9032	Recreation Workers	\$8.56	\$9.01	\$10.07	\$12.43	\$15.44
51-3021	Butchers and Meat Cutters	\$8.97	\$10.25	\$13.48	\$17.71	\$22.09
29-9011	Occupational Health and Safety Specialists	\$22.73	\$28.66	\$36.19	\$43.78	\$51.86
39-2021	Nonfarm Animal Caretakers	\$8.39	\$8.87	\$9.55	\$11.35	\$14.13
29-1131	Veterinarians	\$28.51	\$33.52	\$45.84	\$57.59	\$65.03
17-2081	Environmental Engineers	\$26.22	\$34.95	\$43.05	\$52.25	\$61.21
29-2056	Veterinary Technologists and Technicians	\$10.19	\$11.14	\$14.71	\$18.24	\$21.68
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	\$11.21	\$12.70	\$15.33	\$18.88	\$21.08

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Business & Finance

Introduction

Jobs in the Business and Finance occupation group can be found in nearly every type of business and industry. These workers need strong mathematical and accounting abilities along with project management and planning skills. Workers in this occupation group are in high demand in southeast Michigan.

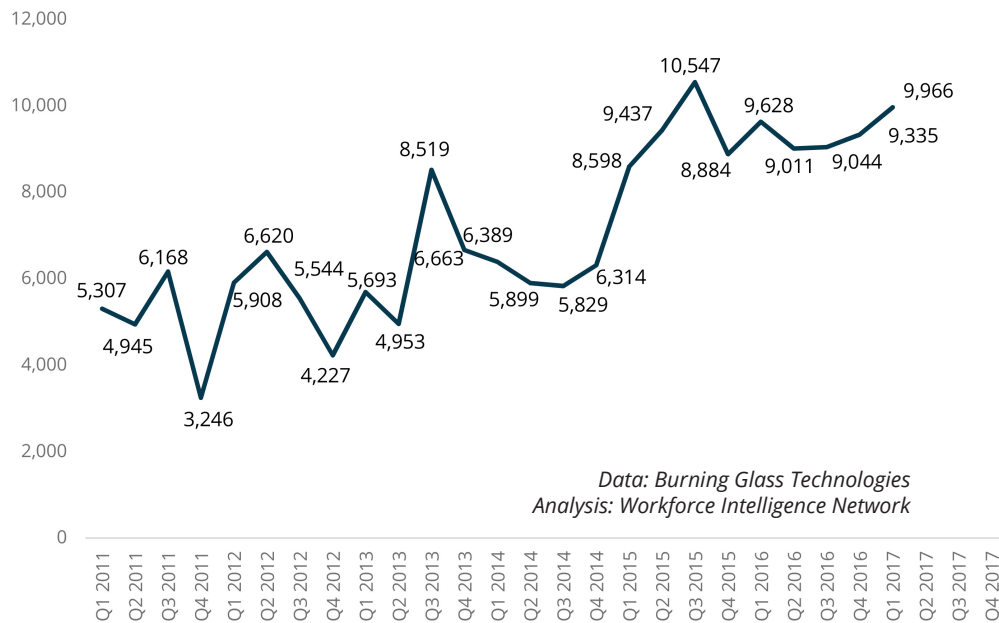
Job Posting Analysis

Online job ads for Business and Finance positions rose by 7 percent between Q4 2016 and Q1 2017, increasing by 631 postings from 9,335 in Q4 2016 to 9,966 in Q1 2017. Recent postings were lower than the Q3 2015 all-time high of 10,547 postings, but remained much higher than the 4,000 to 6,000 average postings between 2011 and 2014.

Employment Analysis

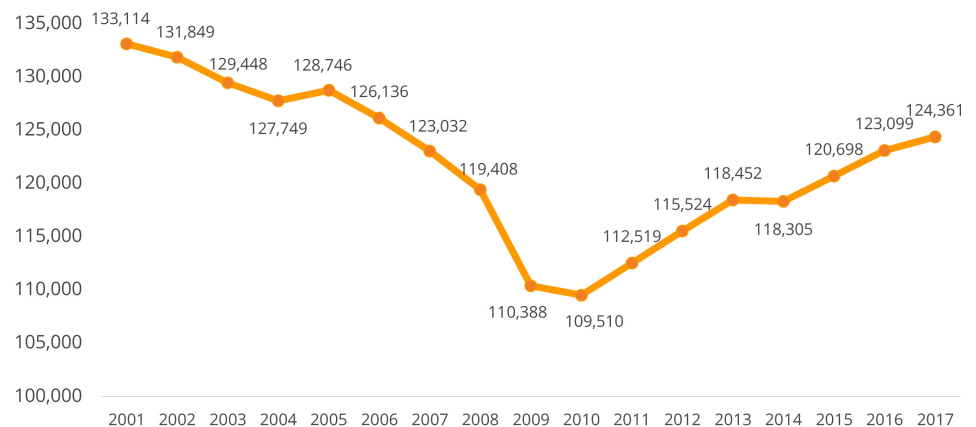
Employment in Business and Finance positions in the region increased by nearly 4,000 workers between 2015 and 2017, marking a nearly 14percent growth since the recession low of 109,510 workers employed in 2010. The region must gain another 2,000 jobs before moving back to the pre-recession high employment level of 133,144 from 2001.

Online Job Postings



Employment Over Time

2017



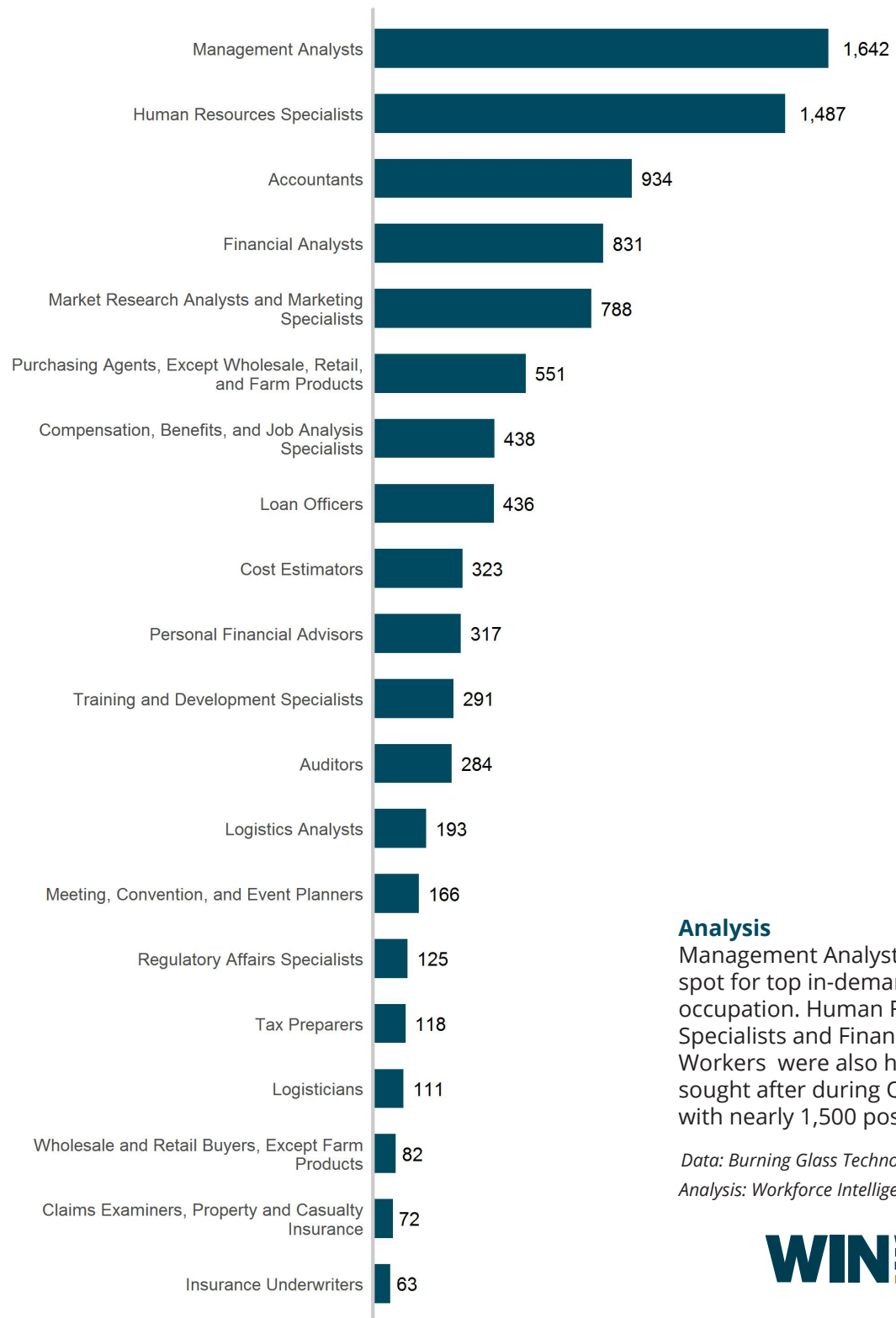


Management Analyst: most in-demand occupation



Business Administration and Finance degrees in-demand

Business & Finance
Top Jobs Posted
Quarter 1 2017



Analysis

Management Analyst held the spot for top in-demand occupation. Human Resources Specialists and Financial Workers were also highly sought after during Q1 2017 with nearly 1,500 postings.

Data: Burning Glass Technologies

Analysis: Workforce Intelligence Network



Bachelor's degree required for most jobs

13%

employment growth since recession

Business & Finance Educational Attainment Required

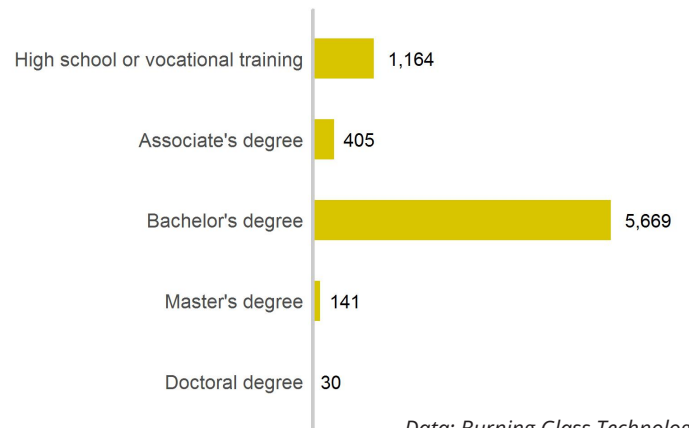
The clear majority of Business and Finance jobs posted require a bachelor's degree. Due to most jobs requiring high-level mathematics skills and management abilities, a bachelor's degree is the most common in-demand credential. High wages tend to follow higher educational attainment.

Most available jobs are five or fewer years of experience. Most employers want to see three to five years of experience, stressing the importance of internships and other on-the-job work-and-learn experiences. A large number of jobs are available to those at the entry level as well.

In-Demand Areas of Study

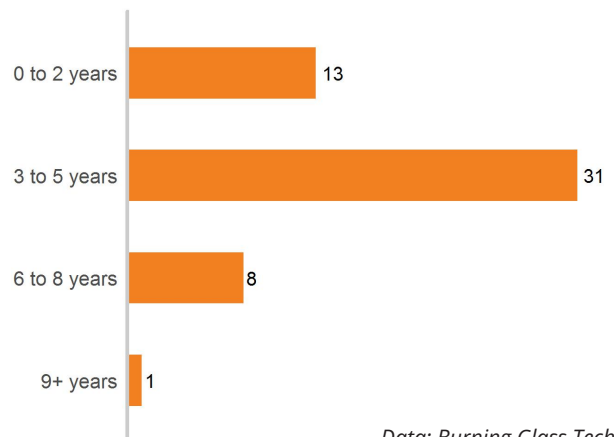
- Business Administration and Management, General
- Accounting
- Finance, General
- Economics, General
- Engineering, General

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Employers in need of workers with Finance Skills



In-demand certifications: CPA, PMP, CISA, PHR

Business & Finance In-Demand Skills

The occupations in the Business and Finance group require a variety of skills. Management and technical skills are highly sought out over a broad area of business disciplines. Advanced technical skills also show up on this list with a focus in data. Data entry, business analysis, and research skill show a spring of demand for analytics in the business environment. Traditional business skills appear as well with emphasis on leadership, self-management, and motivational skills for individuals. These skills reflect a desired business environment with an ample amount of managerial skills, with individuals who are strong in communication, analytical thinking, and self motivation.

Technical In-Demand Skills

- Microsoft Office
- Accounting/ Financial Analysis
- Project Management/ Budgeting
- Customer Service
- Business Analysis

Foundational In-Demand Skills

- Communication Skills
- Writing/ Planning
- Problem Solving
- Organizational Skills
- Detail-Oriented

Job Type

- Temp- 1.0%
- Full Time- 56.5%
- Part Time- 2.2%

Certifications Required

- Certified Public Accountant (CPA)
- Project Management Certification (E.G. PMP)
- Series 7
- Mortgage License
- Certified Financial Planner



\$59,733: average advertised salary during Q1 2017



Most available jobs pay \$50,000+

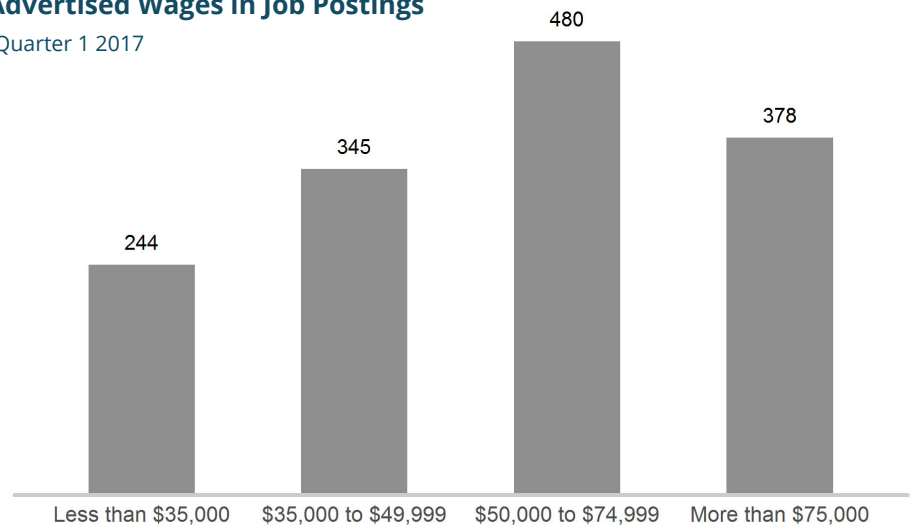
Business & Finance Wages

Of the jobs postings with advertised salaries in Business and Finance in Q1 2017, many included salaries between \$50,000 to \$75,000 a year. Many open positions also offer wages over \$75,000, likely for jobs requiring more experience.

The mean salary for Business and Finance postings during Q1 2017 was \$59,733. Management Analysts reported the highest mean salary of \$82,909 per year.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-1111	Management Analysts	\$23.72	\$30.57	\$39.02	\$49.68	\$63.66
13-1071	Human Resources Specialists	\$16.68	\$21.42	\$27.91	\$35.97	\$46.11
13-2011	Accountants	\$19.32	\$23.86	\$31.72	\$42.09	\$54.49
13-2051	Financial Analysts	\$23.91	\$29.53	\$38.05	\$46.71	\$56.41
13-1161	Market Research Analysts and Marketing Specialists	\$18.52	\$23.66	\$32.02	\$42.59	\$52.77
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	\$20.12	\$25.13	\$33.08	\$42.72	\$52.93
13-1141	Compensation, Benefits, and Job Analysis Specialists	\$20.53	\$24.42	\$29.83	\$38.27	\$47.33
13-2072	Loan Officers	\$13.34	\$18.11	\$23.63	\$32.62	\$49.76
13-1051	Cost Estimators	\$18.21	\$22.31	\$29.04	\$37.54	\$45.69
13-2052	Personal Financial Advisors	\$20.28	\$26.19	\$33.25	\$57.74	\$79.47

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

Jobs in the WIN Construction occupation group are associated with the skilled trades, engineering, management, and planning. Many construction employers are slowly starting to post jobs online, thus, online job ads are not always a complete picture of demand for these workers. Even so, it is an important and in-demand occupation group for southeast Michigan and posting data provides a glimpse into employer needs.

Job Posting Analysis

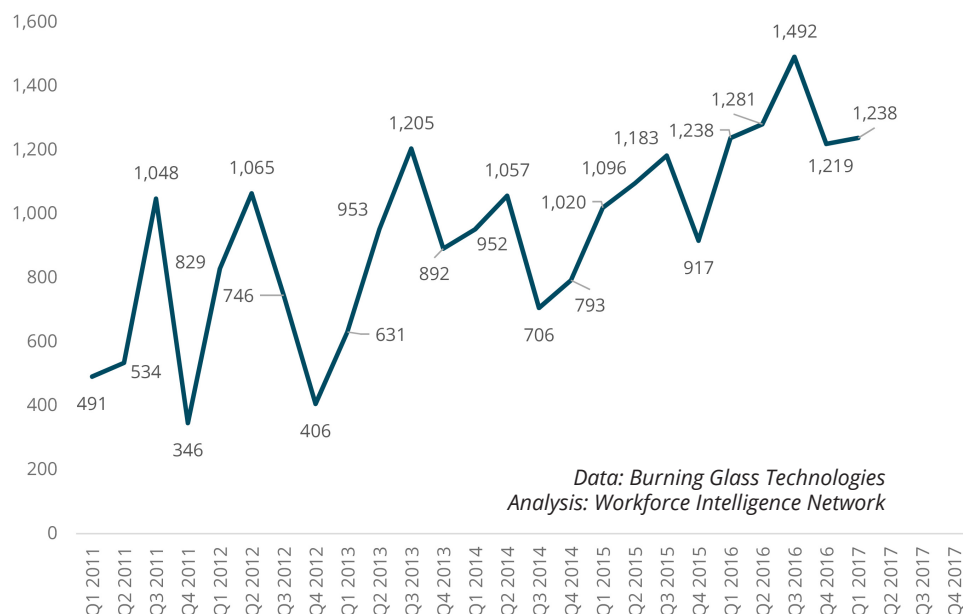
Online job ads for Construction workers in southeast Michigan increased a modest 1.5 percent between Q4 2016 and Q1 2017. Southeast Michigan employers seeking these types of workers at the beginning of 2017 posted 1,238 online job ads between January and March. This increase follows the spike in demand for construction workers in Q3 2016, when employers posted 1,492 online job ads.

Construction employers are beginning to post more online but the trend for most construction hiring is more traditional through word-of-mouth, hiring halls, and unions.

Employment Analysis

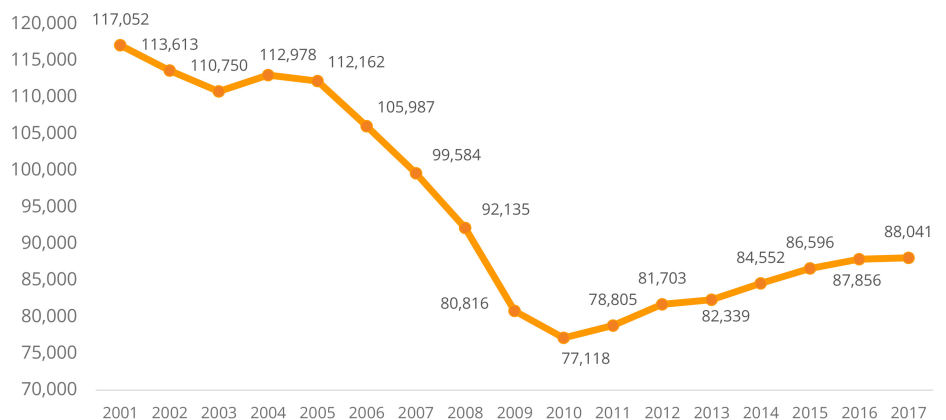
Employment in the Construction occupations in southeast Michigan dropped sharply during the Great Recession and has been slowly recovering. The region has grown its Construction employment 14 percent since 2010, adding nearly 11,000 jobs. Just over 88,000 workers in southeast Michigan were employed in Construction jobs in 2017, compared to over 100,000 workers before 2007.

Online Job Postings



Employment Over Time

2017



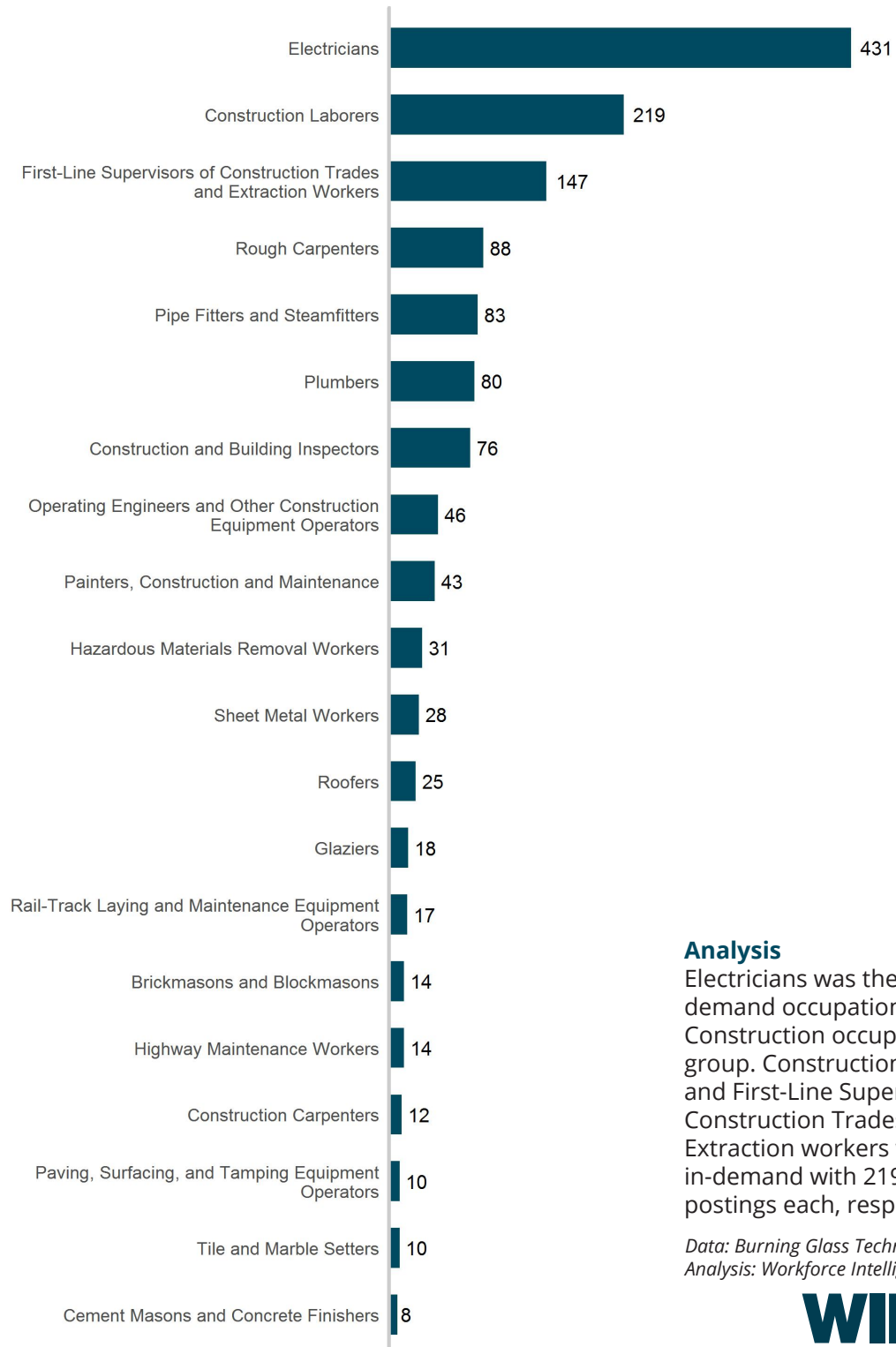


Electricians:
most in-demand job



Over 1,200 online jobs
postings

**Construction
Top Jobs Posted**
Quarter 1 2017



Analysis

Electricians was the top in-demand occupation of Construction occupation group. Construction Laborers and First-Line Supervisors of Construction Trades and Extraction workers were also in-demand with 219 and 147 postings each, respectively.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network





Specialized vocational training is required for most jobs



Most jobs require five years or less of experience

Construction Educational Attainment Required

Most Construction jobs require a registered apprenticeship or other skilled training. While some postings list high school as the only required credential it is clear from the skills listed in postings that vocational training is a must for Construction jobs. Ninety-three percent of Q1 2017 Construction postings required post-secondary or vocational training.

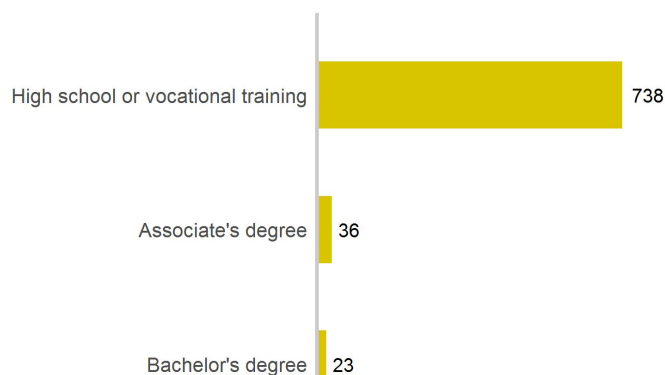
Many Construction jobs require three-to-five years of experience. Entry-level jobs are available to those who have the requisite skills for employment and represent the second most desired experience level for Construction jobs.

In-demand degrees for workers interested in Construction focus on business and engineering related studies. These degrees represent the demand for leaders and designers within the Construction occupation group.

In-Demand Areas of Study

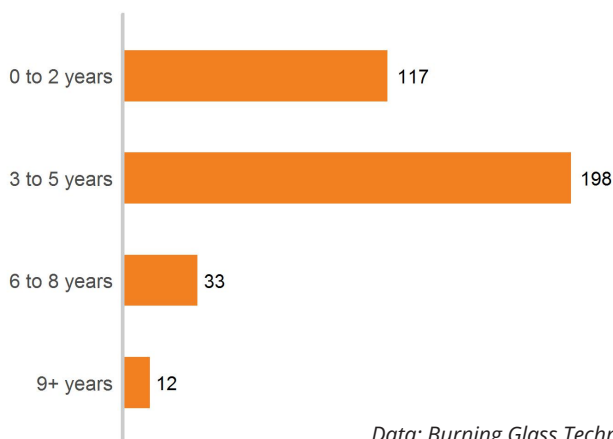
- Engineering, General
- Business Administration and Management, General
- Mechanical Engineering
- Construction Management
- Environmental Engineering Technology/ Environmental Technology

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Technical Skills: Electrical Work, Plumbing, Carpentry

78%

of job postings are for full-time work

Construction In-Demand Skills

In-demand skills for Construction workers range from the highly technical skills to overarching foundational skills necessary for many jobs. Technical skills in demand include carpentry, plumbing, electrical work, repair, and schematic diagram reading and writing. These skills require specialized training outside of high school or an apprenticeship program included as part of a high school curriculum.

Foundational skills are also in high demand. Construction employers want workers to be able to problem solve, manage projects, have strong collaboration skills, and work well with clients. Construction occupations also require physical demand.

Technical In-Demand Skills

- Repair/Inspection
- Electrical Work
- Hand Tools
- Schematic Diagrams
- Plumbing

Foundational In-Demand Skills

- Troubleshooting/Problem Solving
- Writing/Communication Skills
- Ability to perform physical labor
- Mathematics
- Organizational Skills/Detail-Oriented

Job Type

- Full Time: 78.1%
- Part Time: 1.8%
- Temp: 7.2%

Certifications Required

- Commercial Driver's License
- Occupational Safety and Health Administration Certification
- Electrician Certification
- Forklift Operator Certification
- Aerial Lift Certified



\$44,113: average advertised salary during Q1 2017



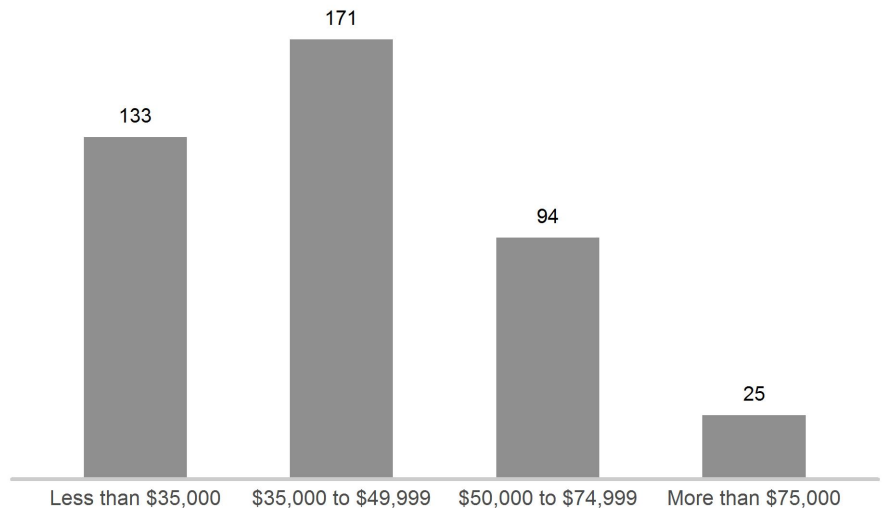
Electricians, plumbers, pipefitters: highest non-management earning potential

Construction Wages

Wages for Construction workers have a broad range and grow with experience. 72 percent of Q1 2017 job postings offered salaries to Construction workers amounting to less than \$50,000 per year. However, a sizeable share of Q1 postings offered higher wages and data. The wage data from the Bureau of Labor Statistics shows that highly-skilled Construction workers, like electricians and plumbers, can make about \$30 per hour. The average advertised wage from Q1 2017 job postings was \$44,113.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
47-2111	Electricians	\$16.94	\$23.16	\$30.24	\$34.13	\$37.71
47-2061	Construction Laborers	\$10.94	\$13.52	\$16.70	\$19.79	\$22.89
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	\$18.84	\$22.00	\$26.54	\$33.75	\$41.13
47-2031	Rough Carpenters	\$13.29	\$16.01	\$19.40	\$23.00	\$26.42
47-2152	Pipe Fitters and Steamfitters	\$16.20	\$21.54	\$29.89	\$35.26	\$38.92
47-2152	Plumbers	\$16.20	\$21.54	\$29.89	\$35.26	\$38.92
47-4011	Construction and Building Inspectors	\$16.05	\$20.66	\$26.38	\$30.86	\$35.89
47-2073	Operating Engineers and Other Construction Equipment Operators	\$17.48	\$19.93	\$23.70	\$27.20	\$30.50
47-2141	Painters, Construction and Maintenance	\$11.28	\$13.75	\$16.09	\$19.06	\$21.15
47-4041	Hazardous Materials Removal Workers	\$14.78	\$18.28	\$22.45	\$26.17	\$28.55

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

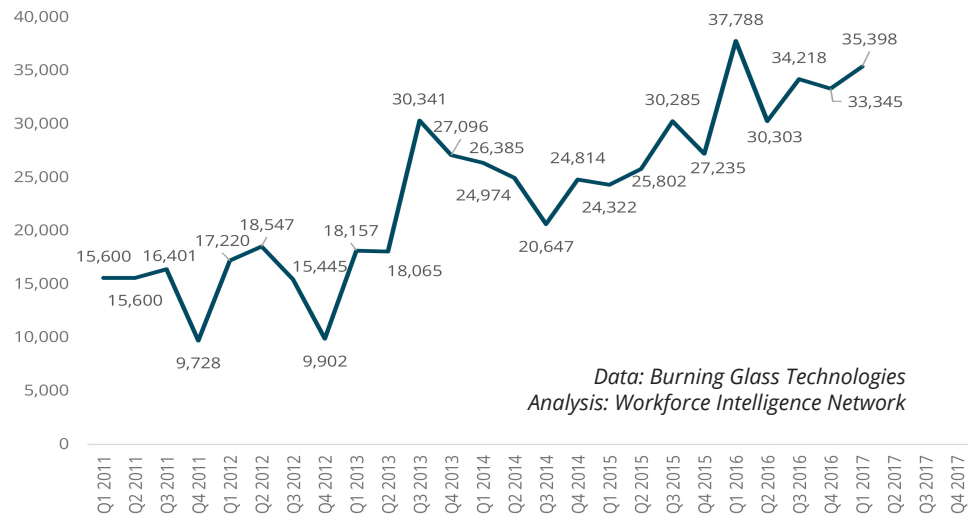


Customer Service

Introduction

The customer service group is the largest occupational group that WIN analyzes, both in terms of employment and online job postings. This group is of very high importance to the region because it is the first to grow when the economy expands and the first to contract in a downturn: it is often a leading indicator. As defined by WIN, this group encompasses all customer service occupations, with skills transferrable across the retail sector, the hotel industry, food and beverage service industry, call centers, and other areas.

Online Job Postings



Job Posting Analysis

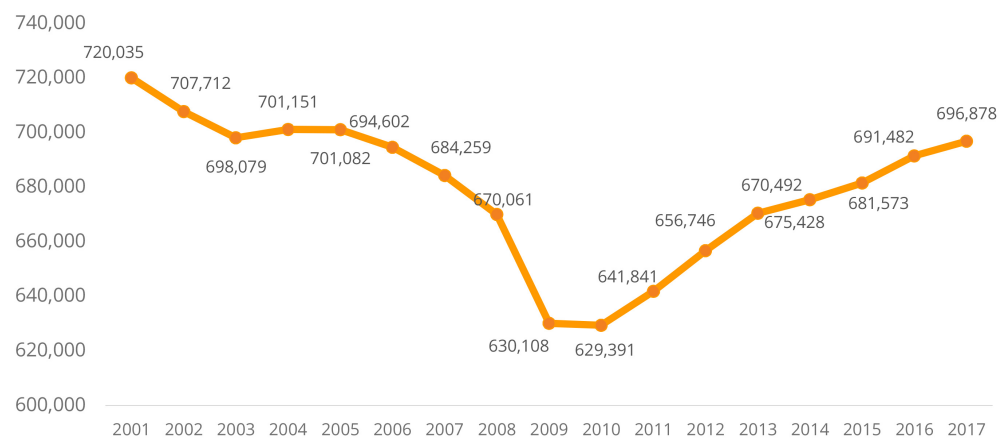
Online job ads for Customer Service workers rose a modest 6 percent between Q4 2016 and Q1 2017 increasing by 2053 postings. This level of posting is 7 percent lower than 37,788 online postings for Business and Finance-related occupations in Q1 2016, a year ago,

Employment Analysis

Employment in Customer Service occupations has increased 10.7 percent since the 2010 recession low, adding nearly 70,000 jobs. Q1 2017 estimates show that nearly 700,000 individuals are employed in Customer Service-related jobs, making it the largest occupation group in the region. Despite Customer Service being the largest occupation group, jobs are growing slowly and employers must add another 20,000 jobs to reach 2001 pre-recession highs.

Employment Over Time

2017



*Data: EMSI
Analysis: Workforce Intelligence Network*

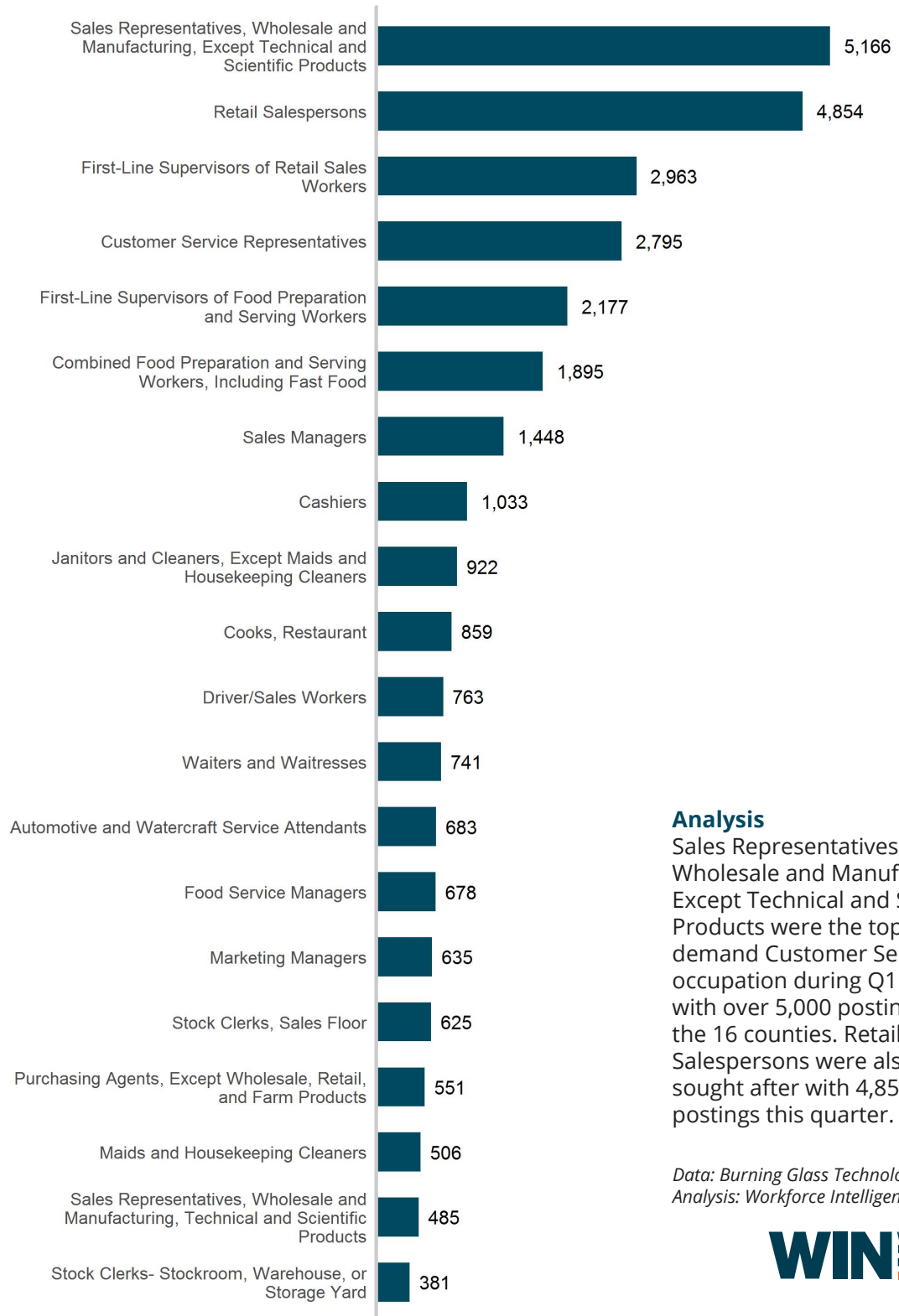


Wholesale and manufacturing
sales: most in-demand



35,398 total postings

**Customer Service
Top Jobs Posted**
Quarter 1 2017



Analysis

Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products were the top in-demand Customer Service occupation during Q1 2017 with over 5,000 postings in the 16 counties. Retail Salespersons were also highly sought after with 4,854 postings this quarter.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Entry-level opportunities
available



High school diploma required

Customer Service Educational Attainment Required

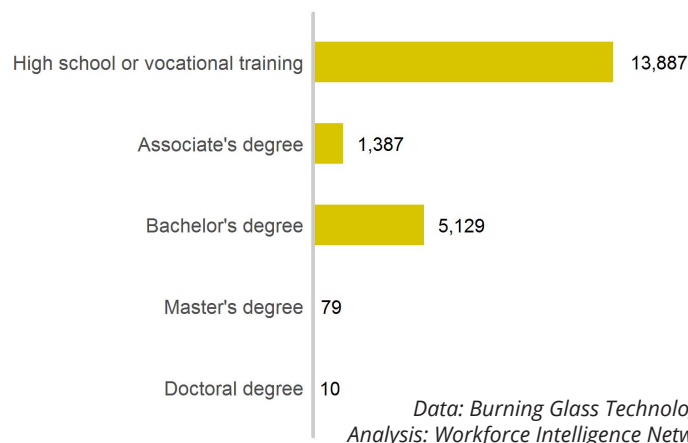
Customer Service jobs either require little-to-no training beyond a high school education, or require a bachelor's degree. This is because occupations in the group range from retail sales and other lower technical skill jobs to those in technical sales and management positions.

Because many Customer Service jobs do not require higher levels of education, many are open to entry-level workers, which allows individuals to gain experience and basic skills before transitioning to another career path or into leadership roles.

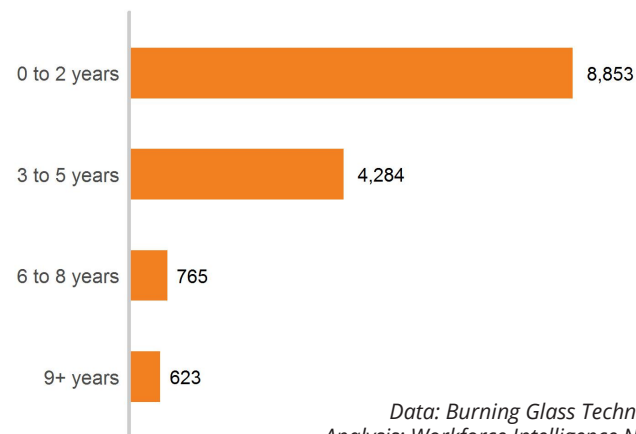
In-Demand Areas of Study

- Business Administration and Management, General
- Engineering, General
- Marketing/Marketing Management, General
- Mechanical Engineering
- Finance, General

Educational Attainment



Experience Required





Essential skill: Customer Service



Managers and supervisors in-demand

Customer Service In-Demand Skills

The postings in the Customer Service group required a wide array of high-level communication skills. The most in-demand skills in this occupation group were sales and customer service, which are skills that link all the jobs in this occupation group. Management skills, such as scheduling and budgeting, were also present in many of the postings for Customer Service related jobs. The skills listed below are vital for Customer Service to build a relationship with customers and provide them with products to meet their needs.

Technical In-Demand Skills

- Sales/ Customer Service/ Customer Contact
- Retail Setting
- Cleaning
- Scheduling/ Store Management/ Supervisory Skills
- Merchandising/ Sales Goals

Foundational In-Demand Skills

- Communication Skills/ Teamwork
- Organizational Skills
- Ability to perform physical labor
- Writing/ Problem Solving
- Computer Skills/ Microsoft Office

Job Type

- Temp- 0.4%
- Full Time- 39.6%
- Part Time- 11.7%

Certifications Required

- SERVSAFE
- Commercial Driver's License
- Automotive Service Excellence (ASE) Certification
- Mortgage License
- CPR Class A



\$59,733 average advertised wage



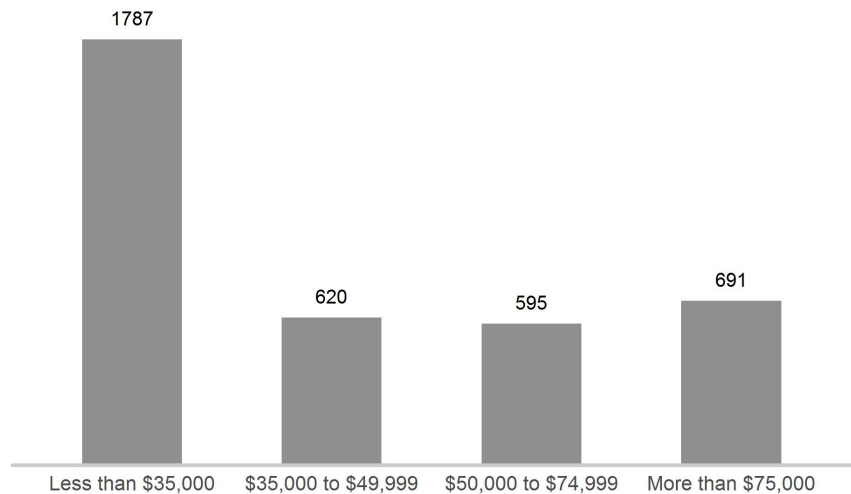
Wholesale and manufacturing sales reported high wage potential

Customer Service Wages

Many Customer Service jobs pay lower wages due to the requirement of fewer technical skills, less training, and a high number of jobs available to workers with little to no experience. Some occupations offer a great deal of wage potential but also require more education and training. While most postings listed wage below \$35,000 the average advertised wage in Q1 2017 was \$59,733. Higher wages for workers with certain credentials and experiences highlight the opportunity in this career area.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
41-4012	Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$13.30	\$19.23	\$27.46	\$39.82	\$55.68
41-2031	Retail Salespersons	\$8.64	\$9.11	\$10.26	\$13.13	\$19.16
41-1011	First-Line Supervisors of Retail Sales Workers	\$11.67	\$14.26	\$17.90	\$22.82	\$29.40
43-4051	Customer Service Representatives	\$9.51	\$11.67	\$15.11	\$19.70	\$25.82
35-1012	First-Line Supervisors of Food Preparation and Serving Workers	\$9.38	\$11.00	\$14.55	\$19.66	\$25.31
35-3021	Combined Food Preparation and Serving Workers, Including Fast Food	\$8.40	\$8.64	\$9.05	\$9.71	\$11.67
11-2022	Sales Managers	\$31.26	\$42.44	\$55.93	\$73.41	\$114.67
41-2011	Cashiers	\$8.43	\$8.79	\$9.45	\$11.41	\$14.64
37-2011	Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$8.81	\$9.64	\$11.63	\$15.00	\$18.70
35-2014	Cooks, Restaurant	\$8.74	\$9.38	\$10.90	\$13.12	\$15.75

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Education

Introduction

Education-related jobs can be found both in the private and public sectors with teachers and other education-related workers employed in public schools, private schools, and training institutions. Jobs in the education occupation group require a variety of skills and credentials dependent on the target age group and topic area for the educator. From elementary school teachers to college professors, educators are the backbone of training the future workforce.

Job Posting Analysis

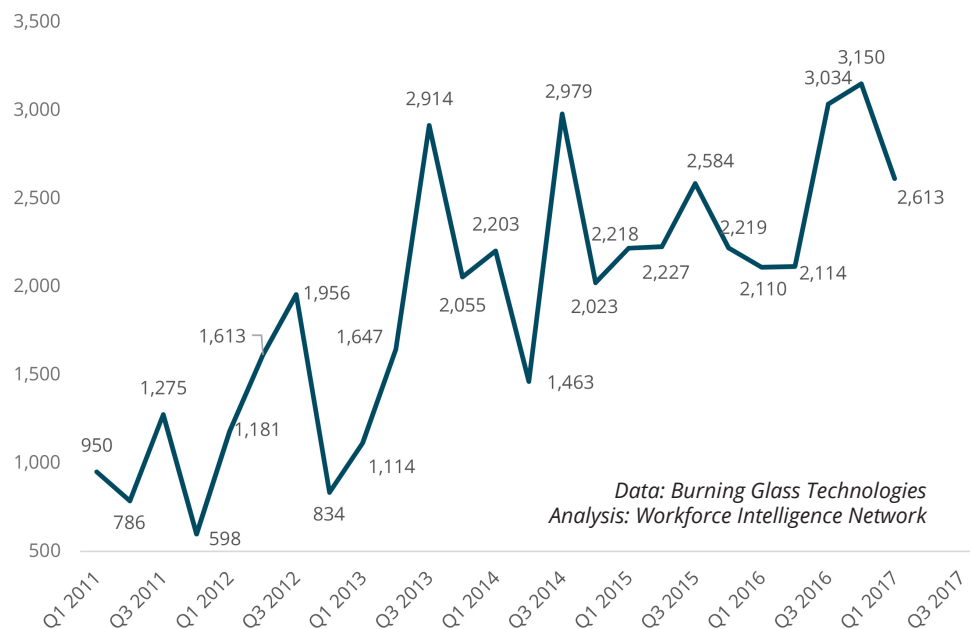
Job postings in Education do not follow a traditional business cycle like many other occupation groups. Instead, postings for Education positions peak during quarter three, particularly in July and August when schools ramp up hiring for the school year. Following a strong showing in the past two quarters with over 3,000 postings each, middle of school year hiring cooled off to 2,613 job postings. However, this is a 23.8 percent increase over Q1 2016, which had 2,110 postings.

Employment Analysis

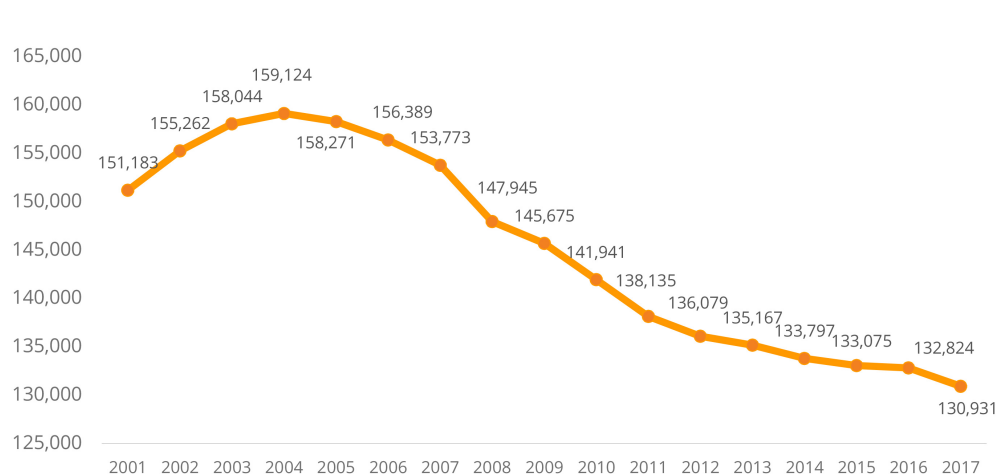
Unlike many other occupation groups that have experienced employment gains since the recession, Education employment has declined. Rather than a precipitous drop in employment during 2009 and 2010 as the economy collapsed, the contraction has been slow but consistent. Education positions, many of which are publicly funded, have fallen due to decreases in government spending on educator positions and universities moving from tenured faculty to part-time staff that are not counted in full-time employment numbers.

Compared to a pre-recession high employment level of 159,124 in 2004, employment has dropped 17.7 percent to 130,931 individuals employed in Education occupations in 2017.

Online Job Postings



Employment Over Time



Data: EMSI
Analysis: Workforce Intelligence Network

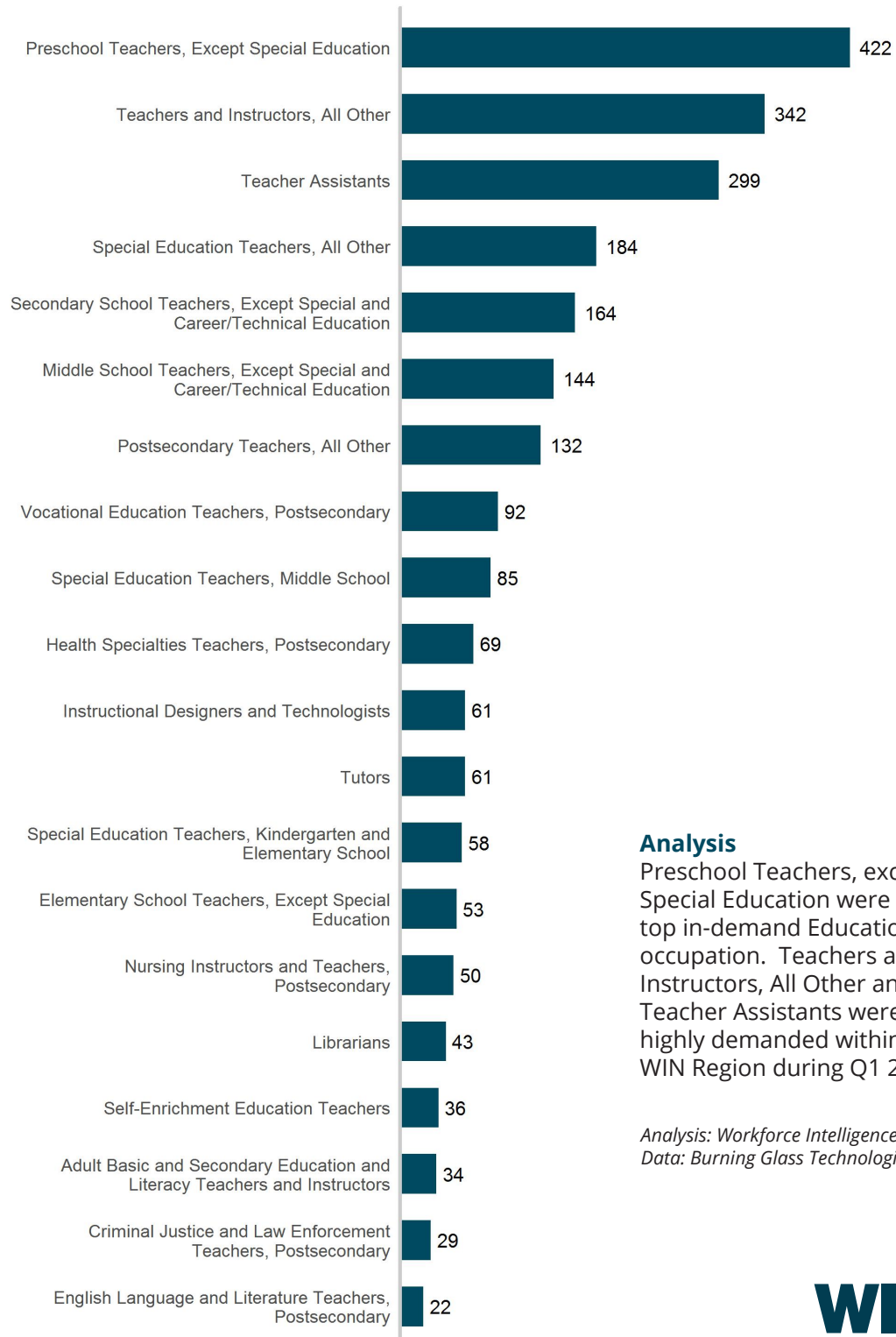


Preschool teachers:
most in-demand



2,613 online job postings

Education
Top Jobs Posted
Quarter 1 2017



Analysis

Preschool Teachers, except Special Education were the top in-demand Education occupation. Teachers and Instructors, All Other and Teacher Assistants were also highly demanded within the WIN Region during Q1 2017.

*Analysis: Workforce Intelligence Network
Data: Burning Glass Technologies*



Bachelor's degree
required for teachers



Entry-level opportunities
available

Education

Educational Attainment Required

Most positions in Education require a college degree as training requirements have increased. 38 percent of these postings ask for applicants holding a bachelor's degree. Another 27 percent of positions, like those for teacher aids, require high school or vocational training instead.

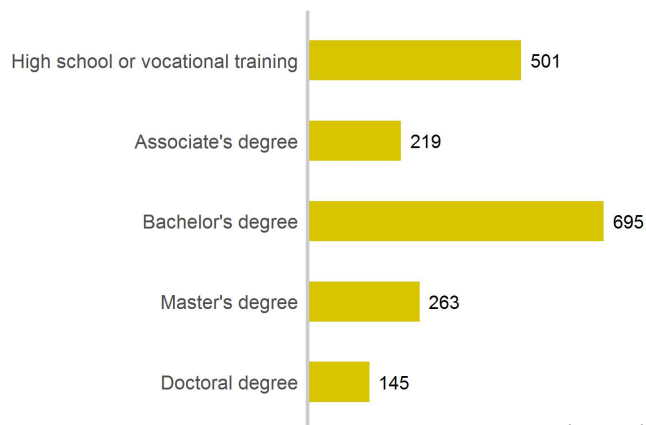
Many positions are open to inexperienced workers, with 71 percent of postings listing entry-level positions. The next most requested experience is three to five years, with 23 percent of job ads.

In-demand degrees for workers interested in Education focus on childhood education and development. Those trained to navigate the changing role of classroom technology are also highly sought after.

In-Demand Areas of Study

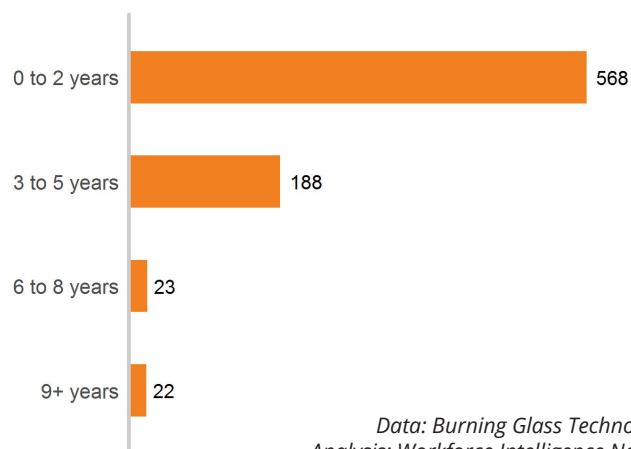
- Early Childhood Education and Teaching
- Nursing Science
- Child Development
- Business Administration and Management
- Educational/Instructional Technology

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Early childhood education and lesson planning: in-demand skills



Teacher certification required

Education In-Demand Skills

To thrive in a classroom setting, teachers and other education workers must be skilled in lesson planning, understanding child development, mathematics, special education, and other teaching-specific skills. The foundational skills required for Education jobs reflect those required for many other jobs. Communications, organization, computer skills, and others are all vital in a modern workplace. Management skills are in demand as well, with supervision, planning, and presenting adding to a teacher's skill set.

Technical In-Demand Skills

- Teaching
- Early Childhood Education/ Child Development
- Lesson Planning
- Supervisory Skills
- Special Education

Foundational In-Demand Skills

- Communication Skills/ Team Work
- Writing/ Planning/ Research
- Organizational Skills
- Ability to perform physical labor
- Problem solving

Job Type

- Full Time- 59.9%
- Part Time- 14.3%
- Temp-11.6%

Certifications Required

- Certified Teacher
- Teaching Certificate
- First Aid CPR AED
- Special Education Certification
- Registered Nurse



\$47,695: average advertised wage in Q1 2017



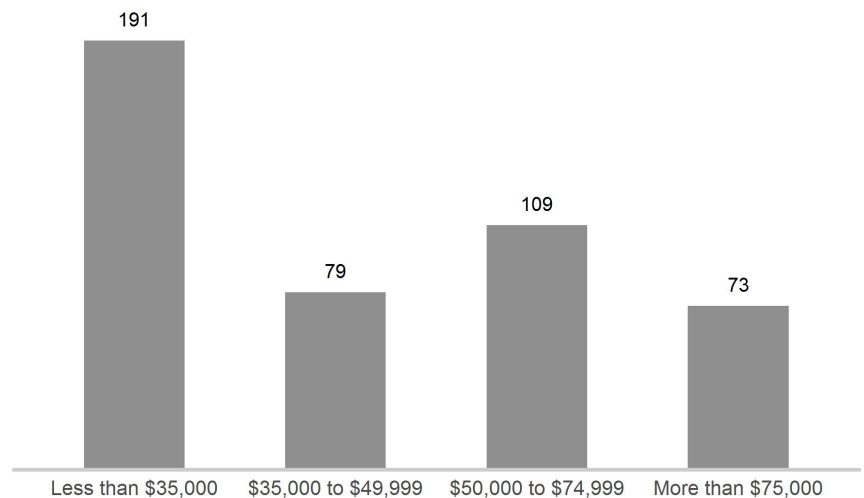
Educational/Instructional Technology emerging area of study

Education Wages

Starting wages for many teaching positions are relatively low, but have long-term growth potential. For many positions, wages are negotiated by a union and increase over time. The average wage advertised in postings during Q1 2017 was \$47,695. While over half of postings list wages below \$35,000, most open positions require little to no experience. Wage growth potential is evident in the 40 percent of postings offering over \$50,000 a year.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
25-2011	Preschool Teachers, Except Special Education	\$9.22	\$10.51	\$12.90	\$16.19	\$20.66
25-3099	Teachers and Instructors, All Other	\$10.85	\$16.11	\$24.48	\$31.94	\$39.29
25-9041	Teacher Assistants	\$8.88	\$9.97	\$12.16	\$15.09	\$18.55
25-2059	Special Education Teachers, All Other	\$18.70	\$23.03	\$30.91	\$40.01	\$48.10
25-2031	Secondary School Teachers, Except Special and Career/Technical Education	\$17.56	\$22.03	\$29.56	\$37.54	\$43.59
25-1099	Middle School Teachers, Except Special and Career/Technical Education	\$19.67	\$25.94	\$37.34	\$52.38	\$76.02
25-1099	Postsecondary Teachers, All Other	\$19.67	\$25.94	\$37.34	\$52.38	\$76.02
25-1194	Vocational Education Teachers, Postsecondary	Data Not Available	Data Not Available	Data Not Available	Data Not Available	Data Not Available
25-2053	Special Education Teachers, Middle School	\$20.04	\$24.06	\$30.54	\$38.50	\$44.03
25-1071	Health Specialties Teachers, Postsecondary	Data Not Available	Data Not Available	Data Not Available	Data Not Available	Data Not Available

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

Energy-related occupations encompass jobs in engineering, science, mining, and extraction. Workers in this field have a range of skills all related to keeping businesses and homes powered. Energy companies employ workers in a variety of occupations, many of which are also included in other WIN occupation groups. Data referenced in this section pertain only to job postings from energy-related businesses.

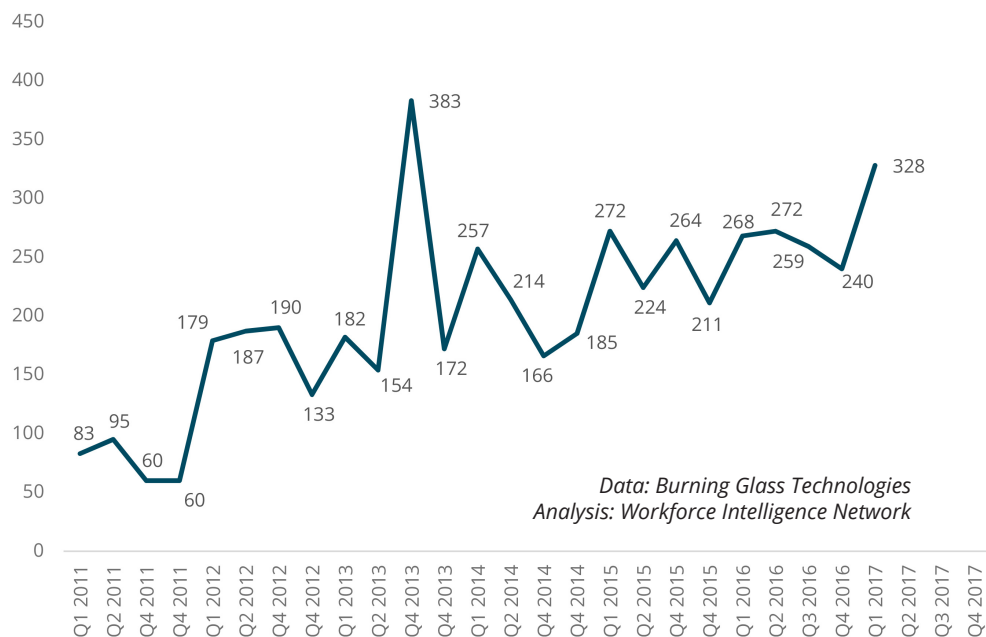
Job Posting Analysis

Online job ads for workers in Energy grew to 328 postings between Q4 2016 and Q1 2017. Postings had remained relatively stagnant for the past six quarters hovering around an average of 250 job ads per quarter, but appear to be on the rise again. Postings are 22 percent higher this in Q1 2017 than in Q1 2016, with 60 additional postings.

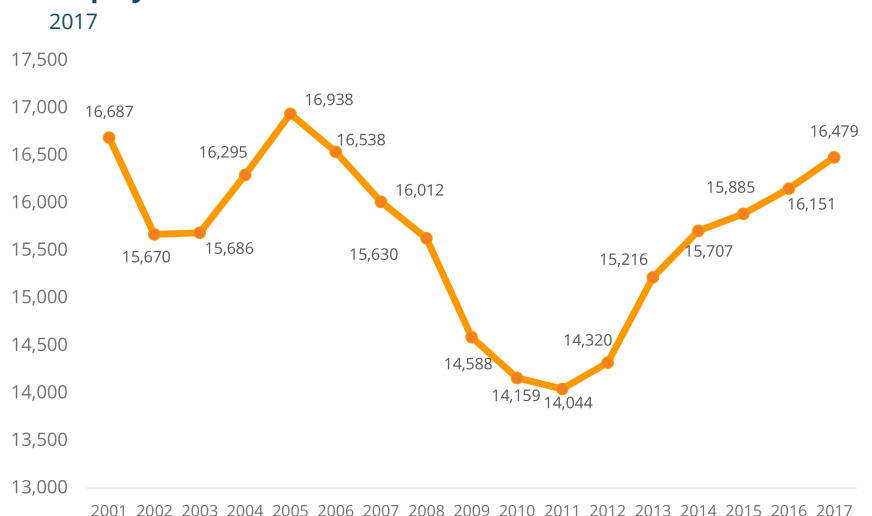
Employment Analysis

The data presented in the graph to the right represents total employment in the Energy industries (NAICS 2111, 2131, 2211, 2212, 2371), not just WIN-designated Energy occupations. In 2017, 16,479 workers are employed in these Energy industries in southeast Michigan. Employment in these industries has been recovering steadily since 2011 and is now over 16,000 workers. This represents a gain of 2,435 workers since the lowest employment level in 2011 and 238 workers since 2016.

Online Job Postings



Employment Over Time



Data: EMSI
Analysis: Workforce Intelligence Network

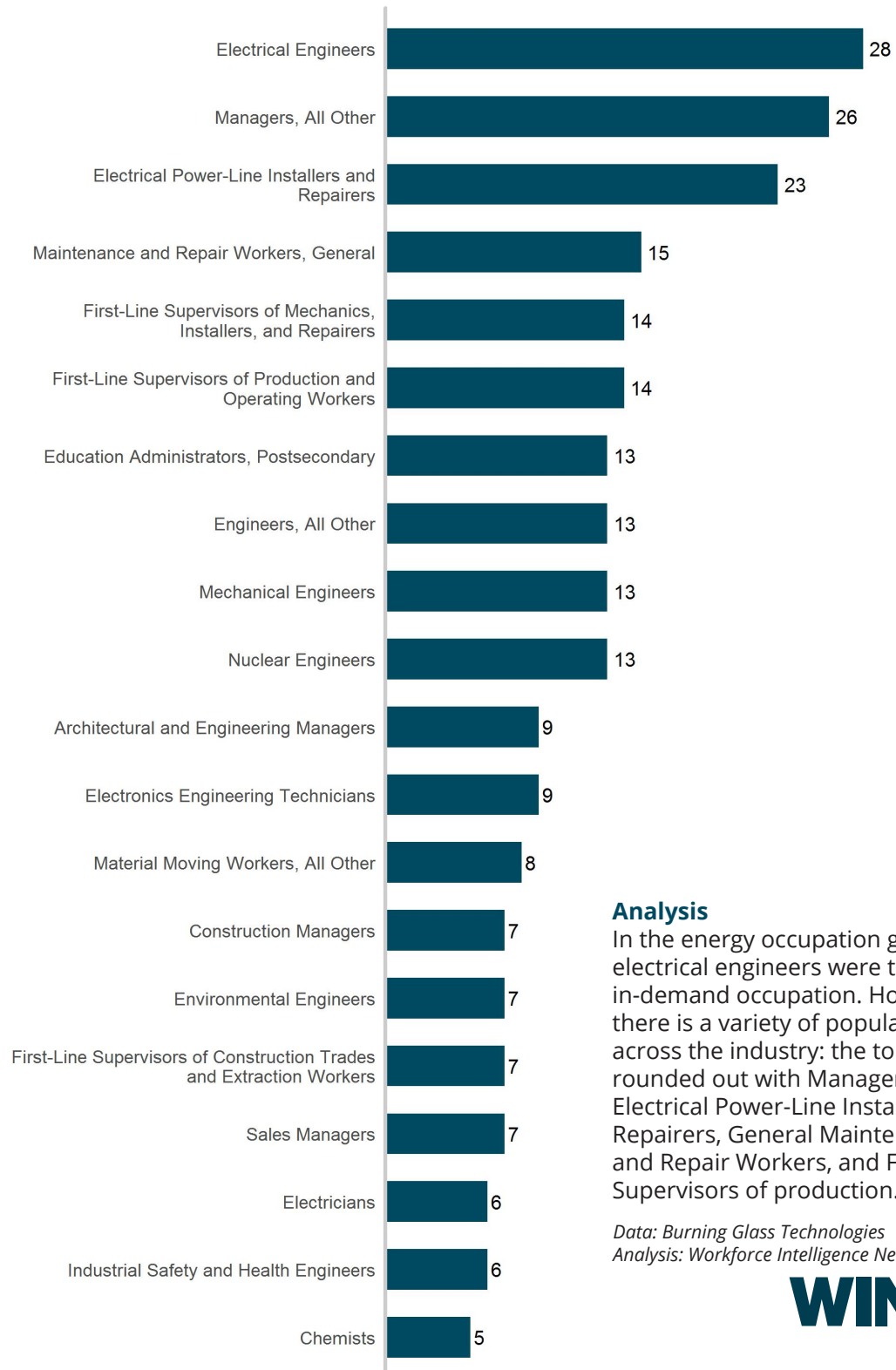


Managers and electrical engineers: most in-demand jobs



328 online postings in Q1: New growth in a stagnant sector

Energy
Top Jobs Posted
Quarter 1 2017



Analysis

In the energy occupation group, electrical engineers were the most in-demand occupation. However, there is a variety of popular jobs across the industry: the top five is rounded out with Managers, Electrical Power-Line Installers and Repairers, General Maintenance and Repair Workers, and First-line Supervisors of production.

Data: Burning Glass Technologies

Analysis: Workforce Intelligence Network





Vocational training and bachelor's degrees both highly sought after



3 to 5 years of previous experience desired

Energy Educational Attainment Required

Jobs in Energy are often engineering positions, and thus require at least a bachelor's degree for employment. However, a wide number of available jobs at the technician level require vocational training such as an apprenticeship.

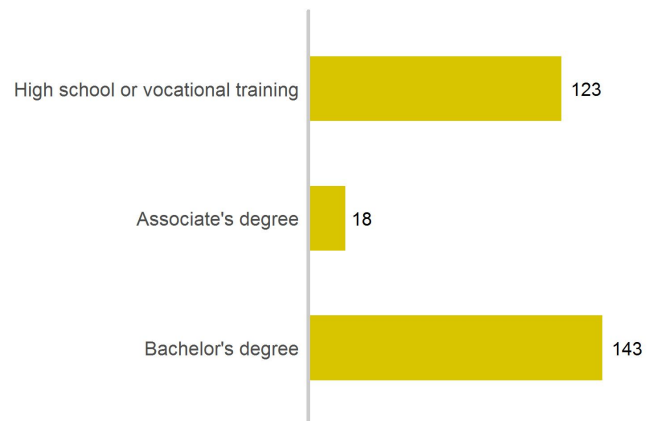
Energy companies posting in Q1 2017 preferred three to five years of experience, with 46 percent of ads that specified experience requesting this level. Other experience levels are evenly represented.

In-demand degrees for workers interested in Energy focus primarily on Engineering fields. While general engineering degrees were the most sought out, focus in electrical and mechanical engineering appeared along top degrees most likely due to the operations of energy plants.

In-Demand Areas of Study

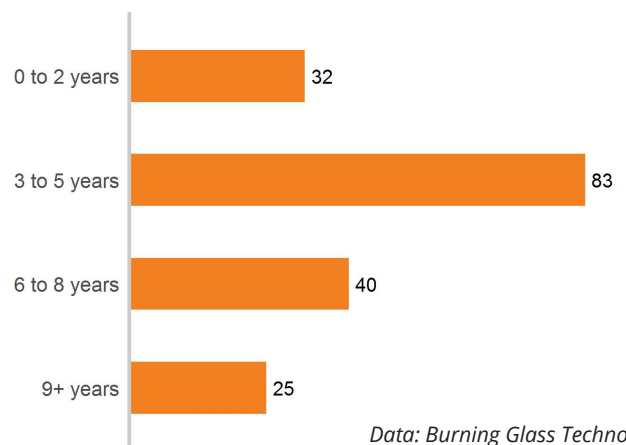
- Engineering, General
- Engineering Technology, General
- Business Administration and Management, General
- Electrical and Electronic Engineering Technologies/Technicians, Other
- Mechanical Engineering

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Management skills in high demand



PMP and Professional Engineer certifications in-demand

Energy In-Demand Skills

Foundational skills for jobs in Energy fields are like those across the other WIN-analyzed occupation groups. Planning, problem solving, and communications skills are necessary for workers. Specialized skills in Energy jobs range from budgeting to schematic diagrams and repair. A wide variety of skills are demanded in these highly technical jobs, especially for those looking to lead and design.

Technical In-Demand Skills

- Budgeting/ Scheduling
- Project Management/ Supervisory Skills
- Schematic Diagrams
- Repair/ Inspection
- Technical Support

Foundational In-Demand Skills

- Problem Solving
- Planning/ Writing/ Research
- Communication Skills
- Mathematics
- Ability to perform physical labor

Job Type

- Full Time- 1.38%
- Part Time- less than 0.1%
- Temp- less than 0.1%

Certifications Required

- Project Management Certification (E.G. PMP)
- Professional Engineer
- Basic Electricity Certificate
- Commercial Driver's License
- Electrical Certification (E.G. Electrical Installation Certification)



\$46,769: Average wage
advertised



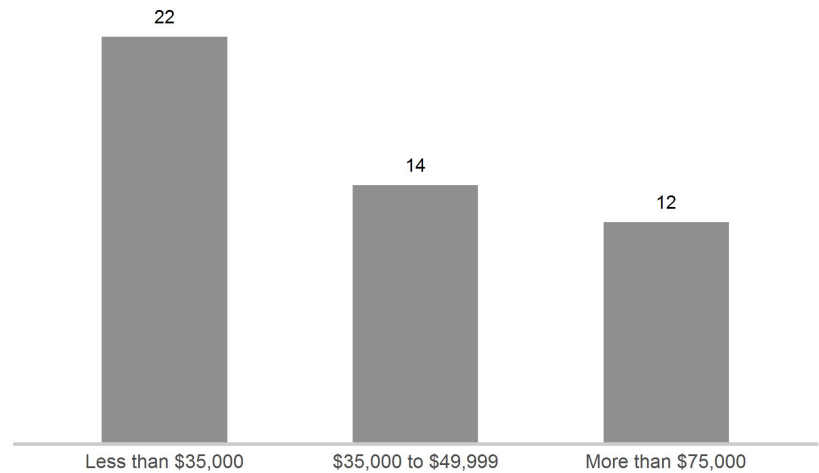
Engineer and Management
positions provide high wage growth

Energy Wages

Few postings in Energy advertise a salary. Of the 15 percent that did list a wage, all were either advertising below \$49,999 or above \$75,000 annually, reflecting the variation in top jobs. The average advertised wage in a posting during Q1 2017 was \$46,769. According to BLS data, wages for energy workers are high and offer upward growth. With greater education requirements comes higher pay and Energy jobs are a great example of this. Nuclear Engineers reported median annual incomes greater than \$100,000.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2071	Electrical Engineers	\$28.97	\$34.90	\$42.69	\$50.55	\$60.05
11-9199	Managers, All Other	\$21.41	\$26.15	\$32.30	\$39.48	\$47.39
49-9051	Electrical Power-Line Installers and Repairers	\$17.32	\$27.88	\$35.66	\$42.17	\$47.23
49-9071	Maintenance and Repair Workers, General	\$10.37	\$12.78	\$16.93	\$22.19	\$27.62
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	\$18.99	\$24.16	\$31.33	\$39.79	\$47.58
51-1011	First-Line Supervisors of Production and Operating Workers	\$17.40	\$22.18	\$29.48	\$38.86	\$47.50
11-9033	Education Administrators, Postsecondary	\$25.01	\$33.19	\$46.46	\$65.31	\$90.49
17-2199	Engineers, All Other	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
17-2141	Mechanical Engineers	\$29.12	\$36.05	\$44.27	\$53.43	\$60.42
17-2161	Nuclear Engineers	\$35.82	\$43.43	\$51.21	\$57.24	\$63.82

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Engineers & Designers (Manufacturing Focused)

Introduction

Jobs in the manufacturing industry can range from assembly and production, to skilled trades and technicians, designers and engineers, and even computer-related occupations such as software development. Demand for engineers in the region has been consistent, and employment has been growing quickly.

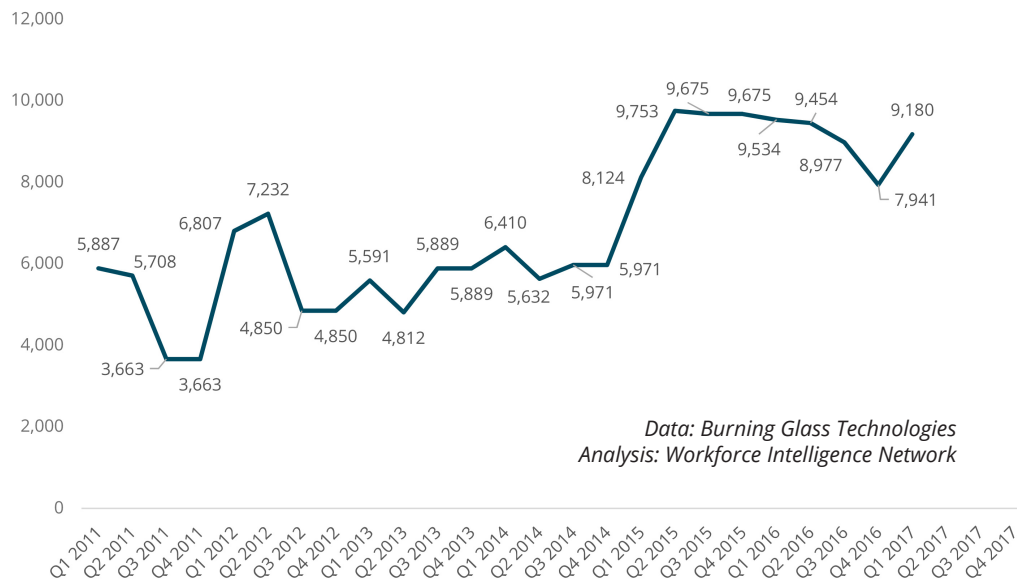
Job Posting Analysis

Job postings for occupations in the Engineering and Design group rose between Q4 2016 and Q1 2017, gaining 1,239 postings for a total of 9,180 postings. This 16 percent growth in postings ends a running trend of decline for this occupation group, although more gains are needed to reach the peak demand from Q2 2015.

Employment Analysis

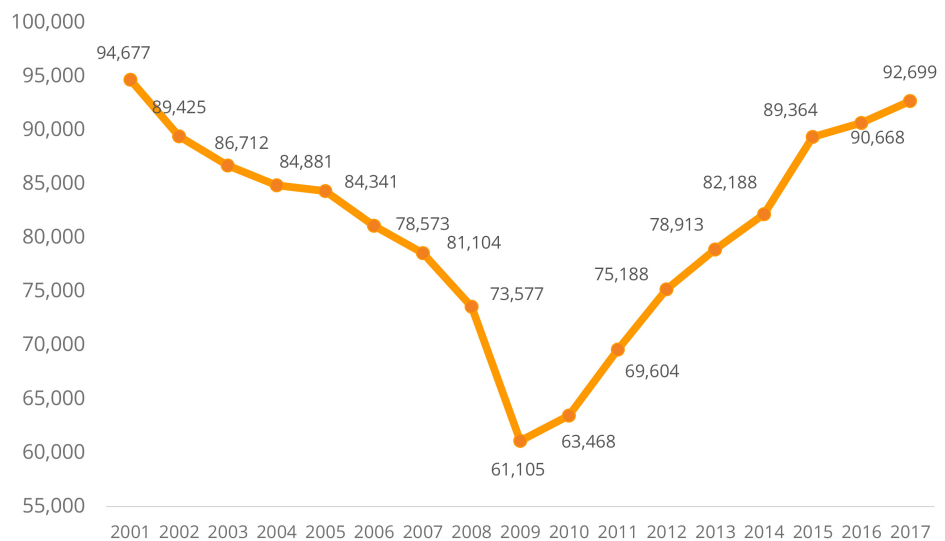
Employment in Engineering and Design occupations has increased 51.7 percent since the lowest point in the recession during 2009 recovering 31,594 jobs over an eight-year period. Postings for these workers are continuously high and hiring has been steady. While growth has been strong, another 1,978 workers need to be employed for job levels to reach 2001 peak pre-recession numbers.

Online Job Postings



Employment Over Time

Quarter 1 2017



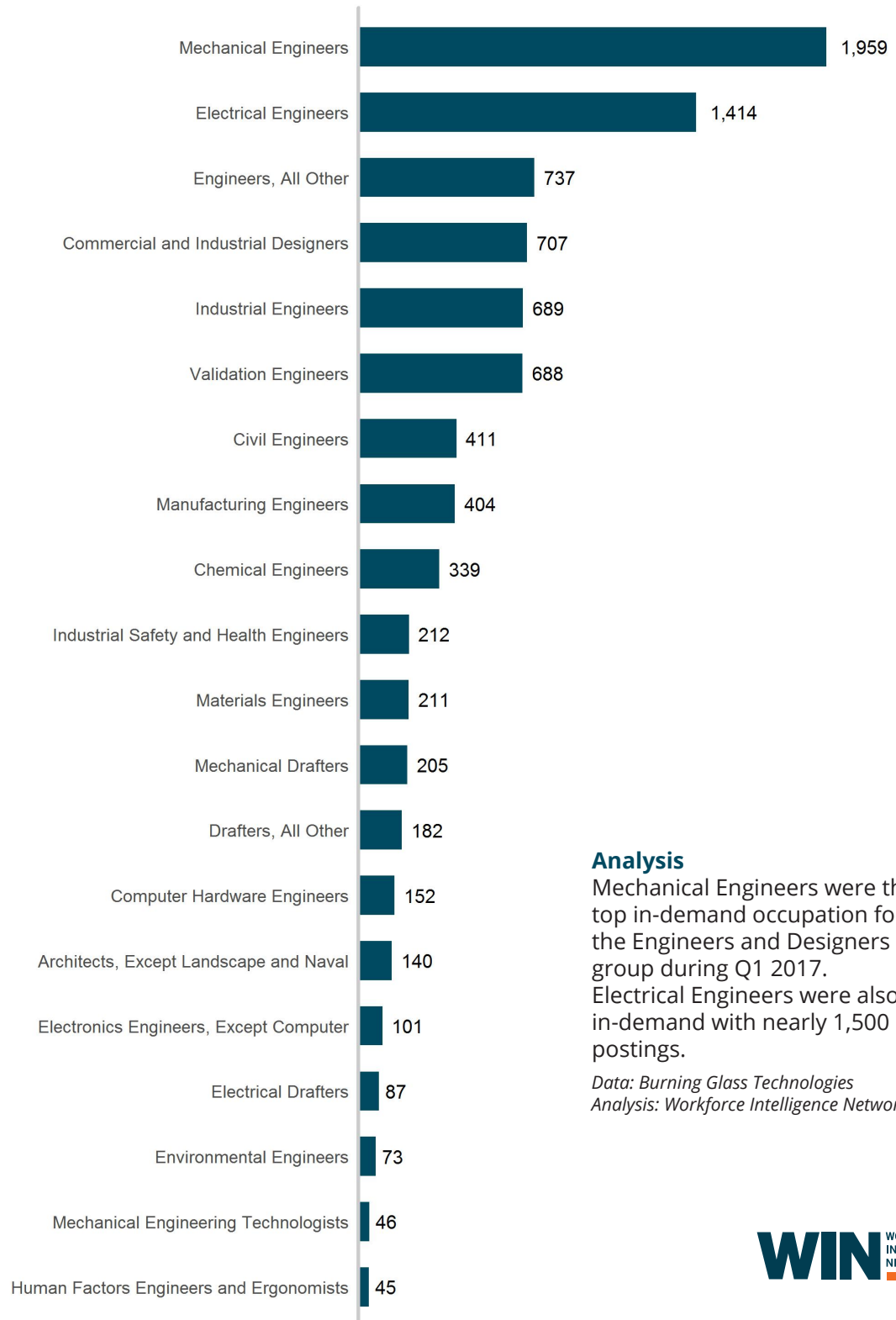


Most in-demand: mechanical
and electrical engineers



9,180 job postings during
Q1 2017

Engineers & Designers
Top Jobs Posted
Quarter 1 2017



Analysis

Mechanical Engineers were the top in-demand occupation for the Engineers and Designers group during Q1 2017. Electrical Engineers were also in-demand with nearly 1,500 postings.

*Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network*



Bachelor's degree required



Employers seeking applicants with 3 to 5 years of experience

Engineers & Designers Educational Attainment Required

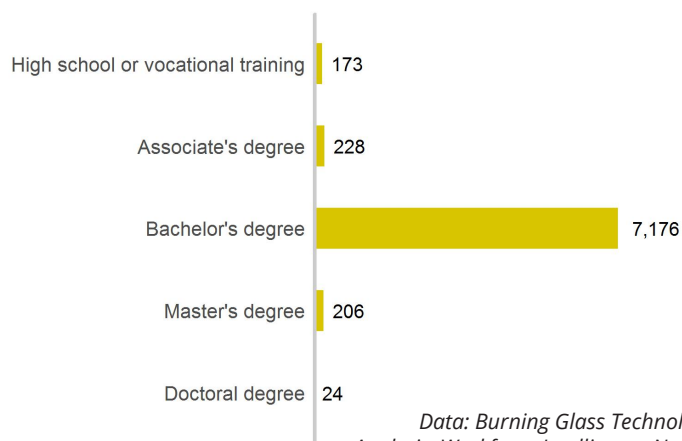
Engineering and Design jobs almost exclusively require a bachelor's degree. Experience has a wider range of requirements. Many applications seek individuals with under 5 years of experience, but about 1,400 postings prefer more experienced candidates. Three to five years of experience is the most popular level with 55 percent of postings that specify this, but the second largest volume of postings targets entry-level applicants.

In-demand degrees for workers interested in Engineering and Design focus primarily on engineering fields. Mechanical, electrical, and computer engineering all round out the top in-demand fields of engineering demand in this occupation group.

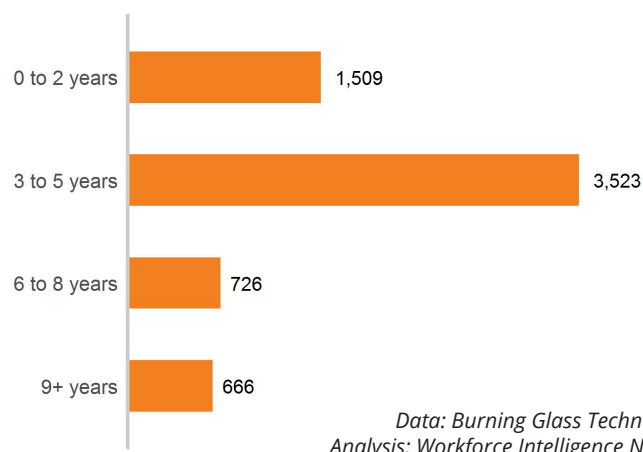
In-Demand Areas of Study

- Engineering, General
- Mechanical Engineering
- Electrical and Electronic Engineering Technologies/Technicians, Other
- Computer Science
- Computer Engineering

Educational Attainment



Experience Required





Validation and product development: in-demand skills



Engineering certification from ABET Required

Engineers & Designers In-Demand Skills

The foundational skills required to be an engineer or designer resemble those for other occupational groups. Communications, management, problem solving, and computer skills are all important for workers in the current economy. Technical skills for engineers are more specific. Mechanical engineering, the top skill, is also the top in-demand job. Many employers also want engineers to be part of the product development and project management processes.

Technical In-Demand Skills

- Mechanical Engineering
- Microsoft Office
- Electrical Engineering
- Validation/ Product Development
- Project Management

Foundational In-Demand Skills

- Communication Skills
- Problem Solving/ Troubleshooting
- Mathematics
- Writing/ Planning/ Research
- Team Work/Collaboration

Job Type

- Full-time: 58.7%
- Part-time: less than 1.0%
- Temporary: 2.1%

Certifications Required

- American Board for Engineering and Technology (ABET) Accredited
- Six Sigma Black Belt
- Six Sigma Certification
- Professional Engineer
- Certified Quality Engineer



\$79,513: Average advertised wage



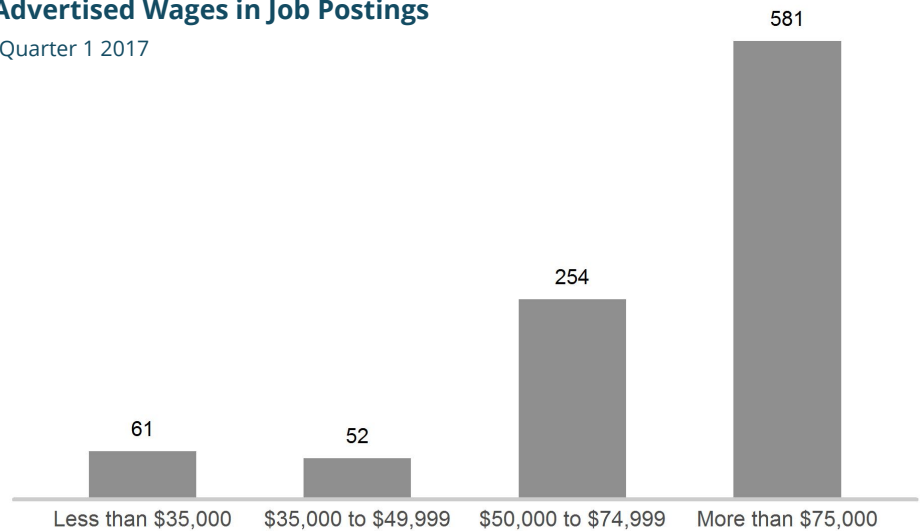
Full-time openings available to Engineer & Designer workers

Engineers & Designers Wages

With such high educational attainment requirements, it follows that most jobs posted for engineers pay more than \$75,000 annually. These are lucrative jobs but require many years of training and technical skill. The average posted wage in Q1 2017 was \$79,513. Median wages for the top ten in-demand occupations all reported median salaries of over \$60,000 per year.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2141	Mechanical Engineers	\$29.12	\$36.05	\$44.27	\$53.43	\$60.42
17-2071	Electrical Engineers	\$28.97	\$34.90	\$42.69	\$50.55	\$60.05
17-2199	Engineers, All Other	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
27-1021	Commercial and Industrial Designers	\$26.26	\$32.64	\$39.12	\$44.93	\$50.70
17-2112	Industrial Engineers	\$30.15	\$36.92	\$43.89	\$52.36	\$59.16
17-2199	Validation Engineers	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
17-2051	Civil Engineers	\$24.61	\$29.18	\$34.59	\$40.59	\$48.81
17-2199	Manufacturing Engineers	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
17-2041	Chemical Engineers	\$28.79	\$33.66	\$40.23	\$49.17	\$62.00
17-2111	Industrial Safety and Health Engineers	\$31.50	\$38.49	\$47.12	\$56.50	\$64.15

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Introduction

WIN's health care occupation group includes jobs related to health care support and practitioners. Employment in this group has been consistently growing due to Michigan's aging population, as well as regulatory and other industry trends. Registered nurses are routinely the most in-demand job in this group. See page 6 for a full list of occupations included in this group.

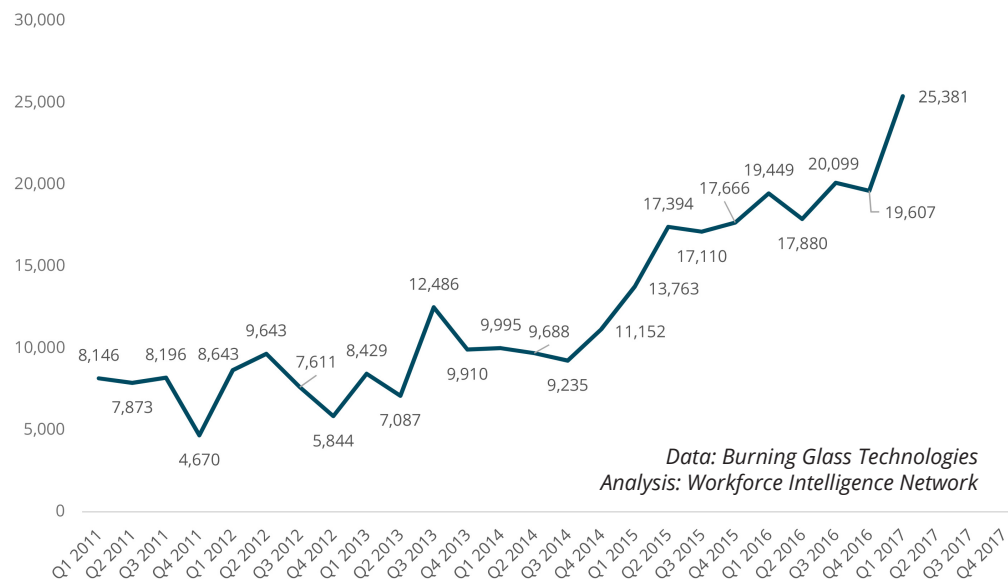
Job Posting Analysis

Job ads for Health Care workers in southeast Michigan increased 29 percent between Q4 2016 and Q1 2017, from 19,607 to over 25,000. Demand for Health Care workers generally fluctuated between 19,500 and 20,000 online job postings per quarter throughout 2016; Q1 2017's level of postings represents the highest demand seen for these workers since WIN began analyzing this occupation group in Q1 2011.

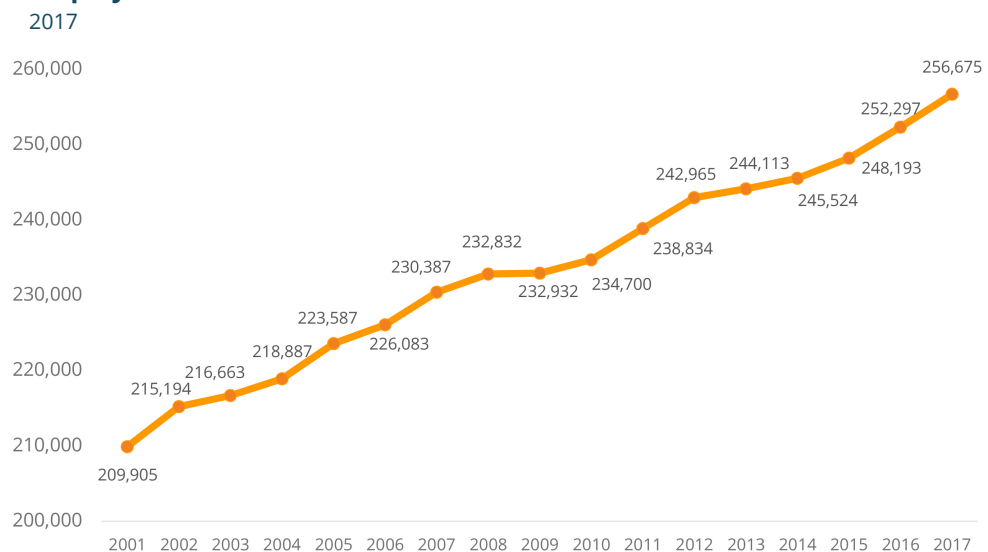
Employment Analysis

Health Care employment has proven to be one of few "recession-proof" occupation groups. Employment growth slowed modestly during the recession but no jobs were lost. Employment in Health Care jobs grew 1.7 percent, adding 4,378 employees, between 2016 and 2017. Growth is likely to continue as demand for services rises.

Online Job Postings



Employment Over Time





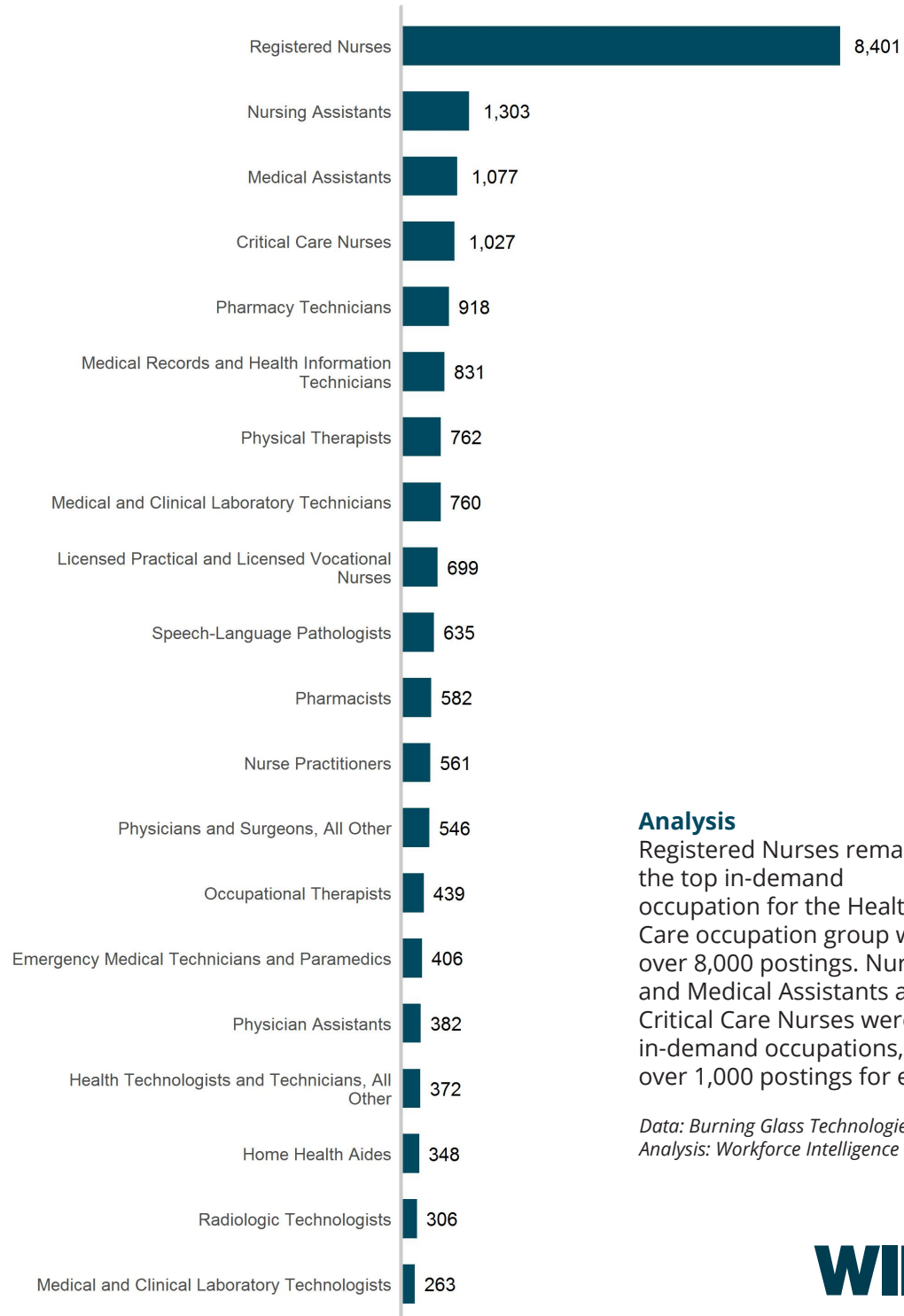
Registered Nurses:
most in-demand job



\$57,545: average
advertised wage

Health Care Top Jobs Posted

Q1 2017



Analysis

Registered Nurses remained the top in-demand occupation for the Health Care occupation group with over 8,000 postings. Nursing and Medical Assistants and Critical Care Nurses were also in-demand occupations, with over 1,000 postings for each.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



25,381 total health care job postings during Q1 2017



Wages tend to increase with education level

Health Care Educational Attainment Required

Educational attainment for the Health Care group is not uniform across occupations. Health Care careers are open to individuals across the educational attainment spectrum, with the largest volume of postings searching for applicants holding an associate's degree. Higher-paying positions such as registered nurses, physicians, and physical therapists tend require more education.

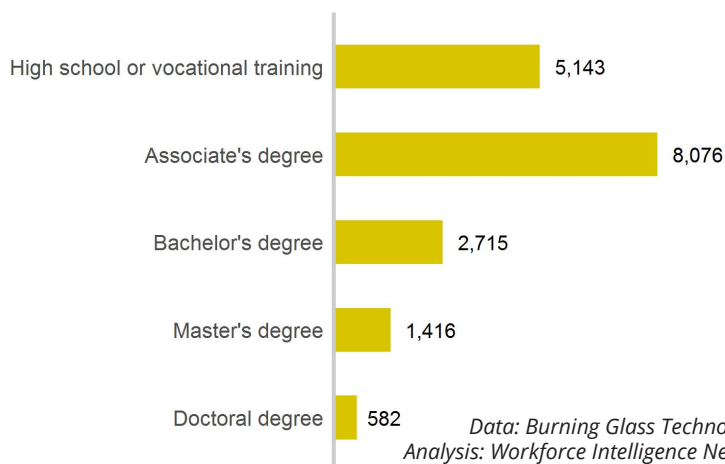
Many Health Care jobs are open to those at the entry level. Most employers that list a desired level of experience are open to hiring workers with two years or fewer of related work experience.

In-demand degrees for workers interested in Health Care focus primarily on Nursing, Physical Therapy, and other health related degrees. With high demand for registered nurses, education in nursing sciences is sought after in the health care occupation group.

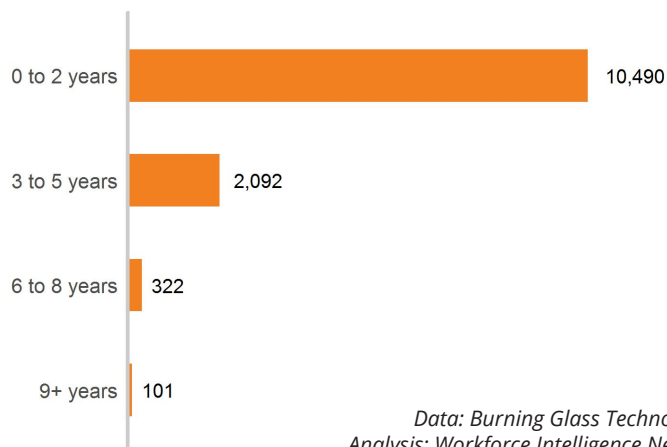
In-Demand Areas of Study

- Nursing Science
- Physical Therapy/Therapist
- Occupational Therapy/Therapist
- Radiologic Technology/Science – Radiographer
- Business Administration and Management, General

Educational Attainment



Experience Required





Opportunities exist for all educational attainment levels



Patient care and communication skills are in-demand

Health Care In-Demand Skills

The skills required of Health Care workers are focused on patient care and communication. The most in-demand technical skills outside of patient care include the ability to train patients and families about treatment. Basic skills in planning, organization, and quality assurance and control are sought after.

Technical In-Demand Skills

- Patient Care/ Treatment Planning/ Patient Education
- Supervisory Skills/ Scheduling
- Teaching
- Cardiopulmonary Resuscitation (CPR)
- Customer Service

Foundational In-Demand Skills

- Communication Skills/ Teamwork
- Writing/ Planning/ Research
- Quality Assurance and Control
- Organizational Skills/ Detail Oriented
- Problem Solving

Job Type

- Full Time: 54.3%
- Part Time: 8.5%
- Temporary: 10.8%

Certifications Required

- Registered Nurse
- First Aid CPR AED
- Basic Cardiac Life Support Certification
- American Heart Association Certificate
- Certified Nursing Assistant



Entry-level opportunities are available in health care



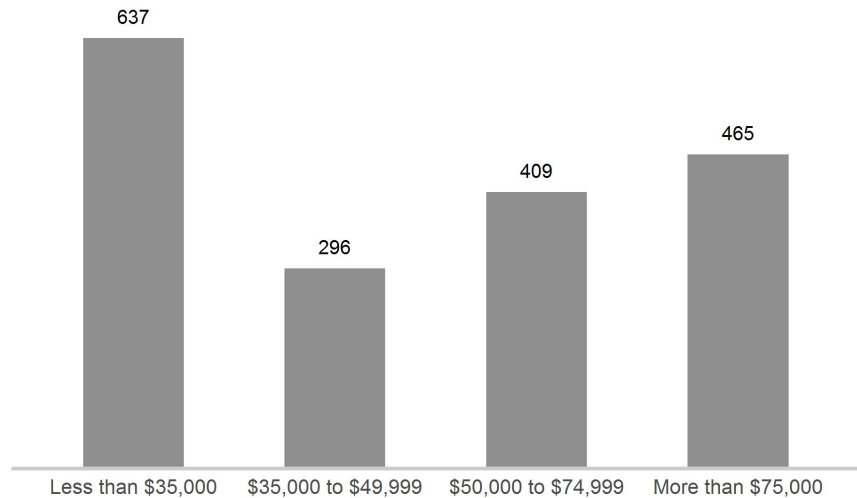
RN certification highly sought after in postings

Health Care Wages

As with educational attainment, salaries offered to Health Care workers in southeast Michigan vary widely. Higher wages are often available to worker with more education. With the large volume of entry-level positions available, most advertised salaries were less than \$35,000 per year. The average salary advertised in Health Care postings during Q1 2017 was \$57,545.

Advertised Wages in Job Postings

2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	\$25.13	\$28.55	\$33.18	\$38.42	\$46.58
31-1014	Nursing Assistants	\$9.96	\$11.65	\$13.46	\$15.52	\$17.56
31-9092	Medical Assistants	\$10.78	\$12.34	\$14.06	\$16.32	\$18.78
29-1141	Critical Care Nurses	\$25.13	\$28.55	\$33.18	\$38.42	\$46.58
29-2052	Pharmacy Technicians	\$10.04	\$11.90	\$14.61	\$17.31	\$19.25
29-2071	Medical Records and Health Information Technicians	\$11.74	\$14.25	\$17.98	\$22.66	\$27.43
29-1123	Physical Therapists	\$27.34	\$33.06	\$39.92	\$49.33	\$62.25
29-2012	Medical and Clinical Laboratory Technicians	\$10.79	\$12.75	\$15.28	\$19.12	\$27.00
29-2061	Licensed Practical and Licensed Vocational Nurses	\$18.51	\$20.51	\$23.28	\$26.23	\$28.45
29-1127	Speech-Language Pathologists	\$25.14	\$29.92	\$36.14	\$43.81	\$61.10

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Information Technology

Introduction

Information technology jobs include occupations that are associated with entry level, technical, and professional careers related to the design, development, support and management of hardware, software, multimedia, and systems integration services. While the information technology group does not currently meet the employment levels of the others, it is quickly growing.

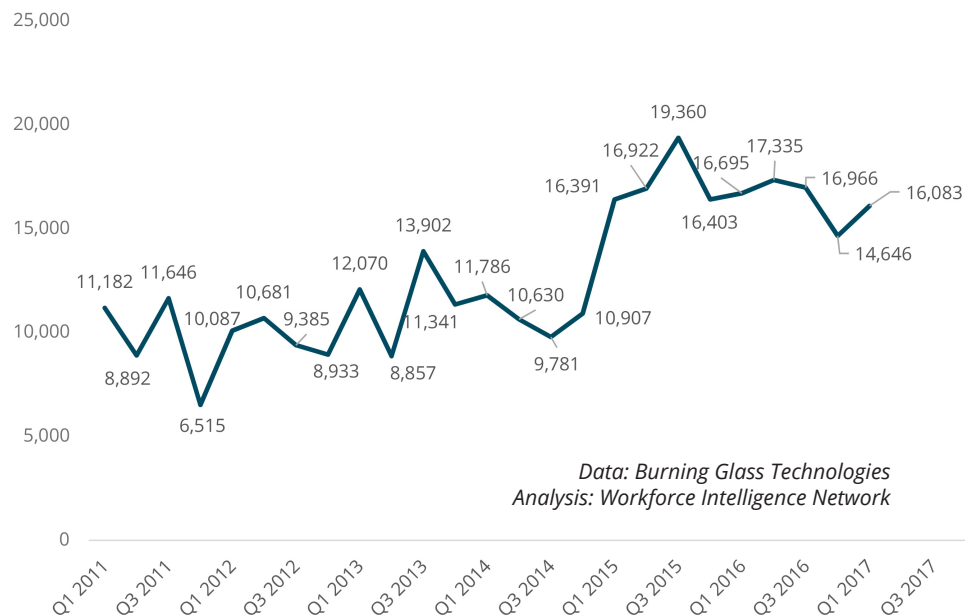
Job Posting Analysis

After a decrease in postings between Q3 and Q4 2016, demand for IT workers in southeast Michigan increased in Q1 2017. With 16,083 job postings in Q1 2017, demand for IT workers was nearly 10 percent higher than in Q4 2016. Postings for IT workers in southeast Michigan generally fluctuate between 16,000 and 17,500, with as many as 19,360 in Q3 2015.

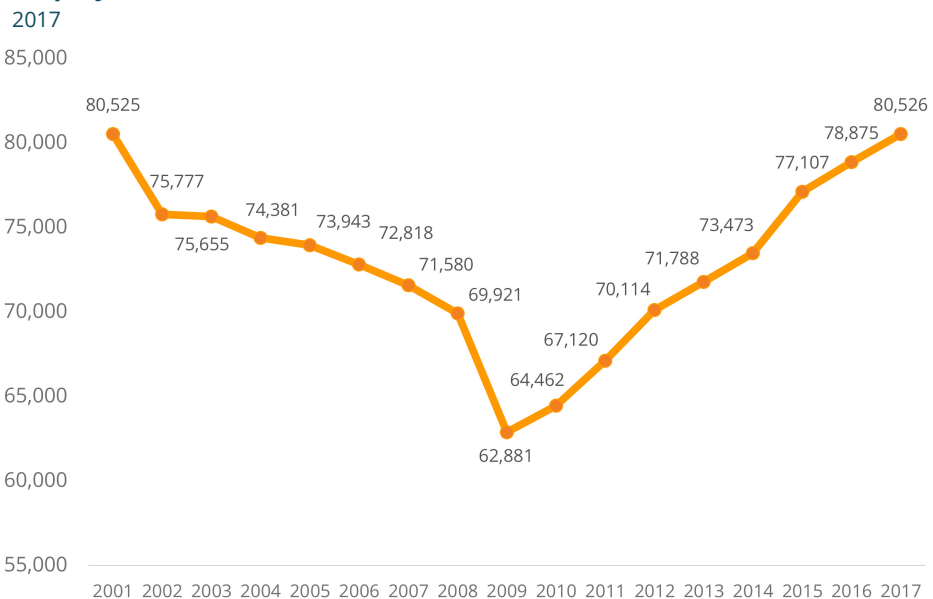
Employment Analysis

IT employment has increased 28 percent with 17,645 jobs added between 2009 and 2017. Employment continues to grow rapidly and employment numbers match southeast Michigan's pre-recession highs, with 80,526 workers employed in IT occupations in Q1 2017.

Online Job Postings



Employment Over Time



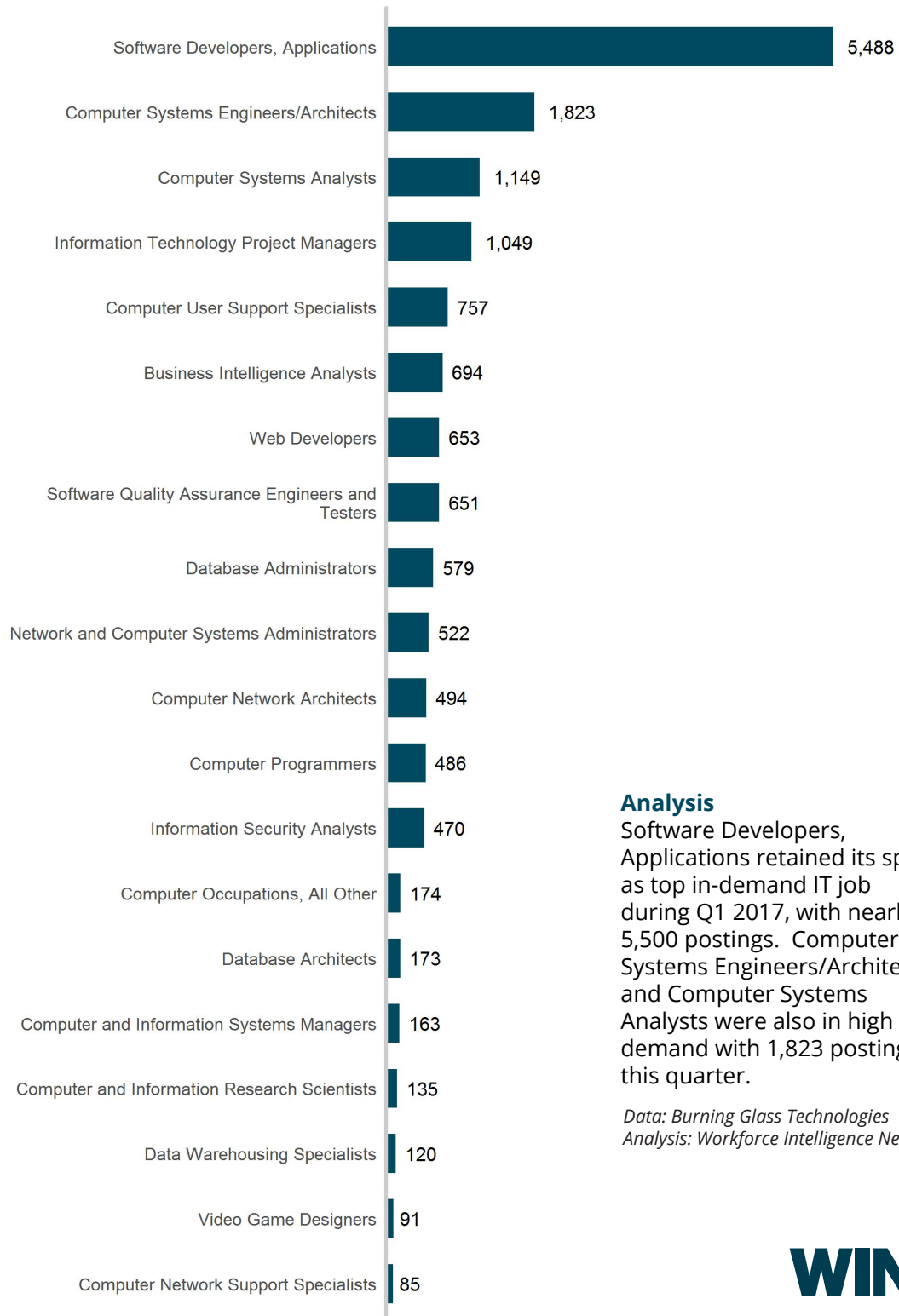


Application software
developers: most in-demand



16,083 total postings during
Q1 2017

Information Technology
Top Jobs Posted
Quarter 1 2017



Analysis

Software Developers, Applications retained its spot as top in-demand IT job during Q1 2017, with nearly 5,500 postings. Computer Systems Engineers/Architects and Computer Systems Analysts were also in high demand with 1,823 postings this quarter.

*Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network*



Bachelor's degree required
for most IT positions



Workers with 3 to 5 years of
experience in-demand

Information Technology Educational Attainment Required

IT workers in southeast Michigan are generally expected to have a bachelor's degree. Of the employers that posted required educational attainment for IT jobs in Q1 2017, 84 percent required a bachelor's degree. Some IT positions can be obtained with shorter-term training or certification.

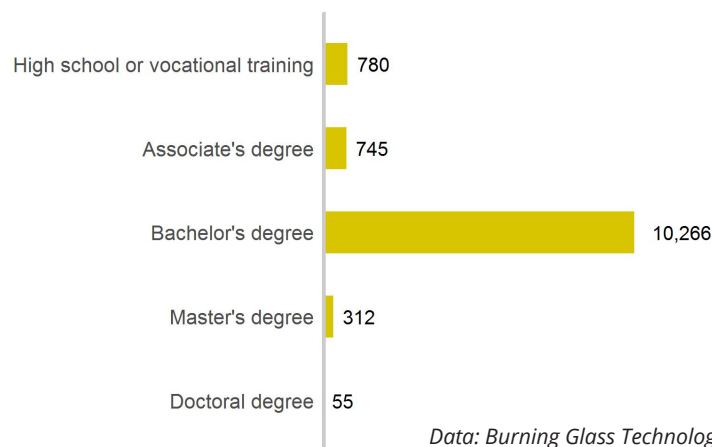
Many employers want IT workers with three to five years of experience. Jobs are available at the entry-level but with the rapid pace of technology change and adaption employers are seeking experienced talent.

In-demand degrees for workers interested in IT focus primarily on computer science and engineering degrees. As IT workers work specifically with various technology, degrees focusing on computer applications, understanding advanced technologies, and the designing of components and programs are vital in this occupation group.

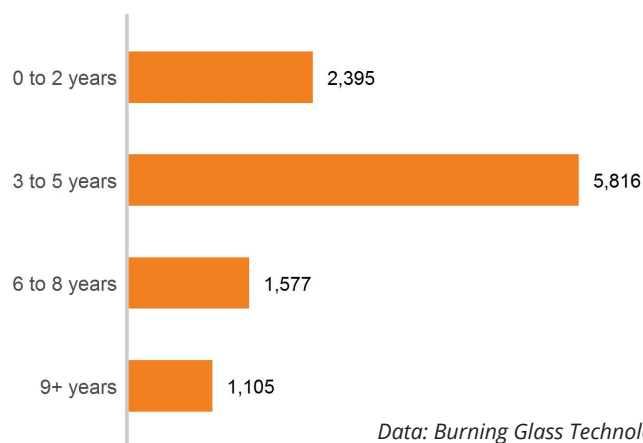
In-Demand Areas of Study

- Computer Science
- Engineering, General
- Electrical and Electronic Engineering Technologies/Technicians, Other
- Mechanical Engineering
- Computer Engineering

Educational Attainment



Experience Required





SQL, JAVA, LINUX: In-demand languages



PMP and CSSIP Certifications in demand

Information Technology In-Demand Skills

IT employers are seeking candidates who have a combination of highly technical skills and coding language fluency as well as foundational skills important for any job . Several coding languages are often listed in postings such as JAVA and C++. In-demand foundational skills include communications, project management, and problem solving.

Technical In-Demand Skills

- Software Development/Engineering
- SQL/ JAVA
- Project Management
- Oracle
- Information Systems

Foundational In-Demand Skills

- Communication Skills/Team Work/ Collaboration
- Writing/Planning/Research
- Problem Solving/Troubleshooting
- Organizational Skills/Detail Oriented
- Mathematics

Job Type

- Full Time: 53.3%
- Part Time: 0.7%
- Temp: 2.8%

Certifications Required

- Project Management Certification (E.G. PMP)
- Certified Information Systems Security Professional (CISSP)
- Cisco Certified Network Associate
- Security Clearance
- American Board for Engineering and Technology (ABET) Accredited



\$88,818: Average advertised salary



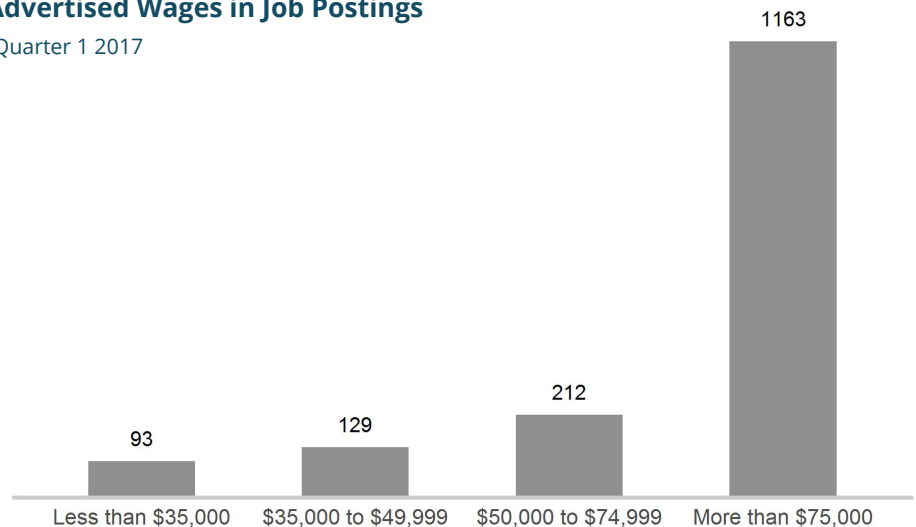
Software developers reported high wage growth potential

Information Technology Wages

Wages for IT workers were relatively high compared to the other occupation groups found within this report. Of the postings that list wages, most offer workers over \$75,000 per year. The average advertised salary during Q1 2017 was \$88,818. Salary data from the Bureau of Labor Statistics further illustrate that IT workers in southeast Michigan can make high wages with a bachelor's degree and some experience in the field.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1132	Software Developers, Applications	\$24.49	\$31.41	\$41.29	\$52.84	\$62.33
15-1199	Computer Systems Engineers/Architects	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1121	Computer Systems Analysts	\$24.90	\$32.41	\$42.22	\$52.19	\$61.08
15-1199	Information Technology Project Managers	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1151	Computer User Support Specialists	\$12.93	\$16.14	\$21.67	\$29.23	\$37.27
15-1199	Business Intelligence Analysts	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1134	Web Developers	\$17.84	\$20.97	\$26.29	\$32.47	\$38.64
15-1199	Software Quality Assurance Engineers and Testers	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1141	Database Administrators	\$25.15	\$32.59	\$42.84	\$51.69	\$59.65
15-1142	Network and Computer Systems Administrators	\$22.44	\$28.27	\$36.76	\$44.60	\$52.88

Data: EMSI, BLS

Analysis: Workforce Intelligence Network

Skilled Trades & Technicians (Manufacturing Focused)

Introduction

WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled- trades labor, such as CNC machinists and welders, than almost anywhere else in the country.

NOTE: Skilled trades related to construction and assembly are not included in this cluster, as the focus is on advanced manufacturing only.

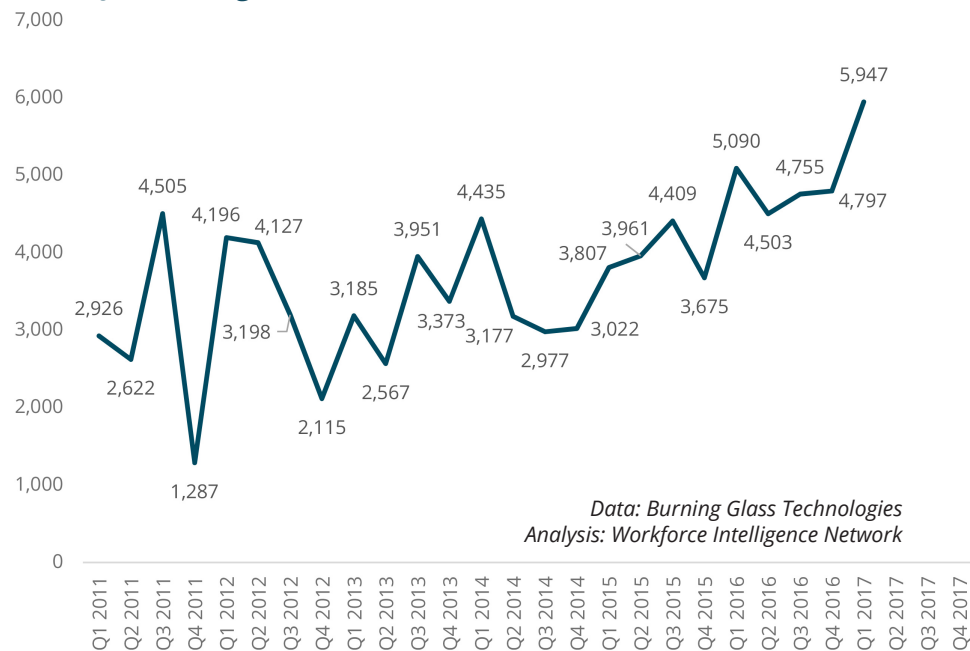
Job Posting Analysis

Skilled trade job demand experienced a strong growth between Q4 2016 and Q1 2017, gaining 1,150 postings to reach a new high of 5,947. The growth for skilled trade jobs is a continuation of an ongoing upward trend in demand for Skilled Trade workers over the past four years.

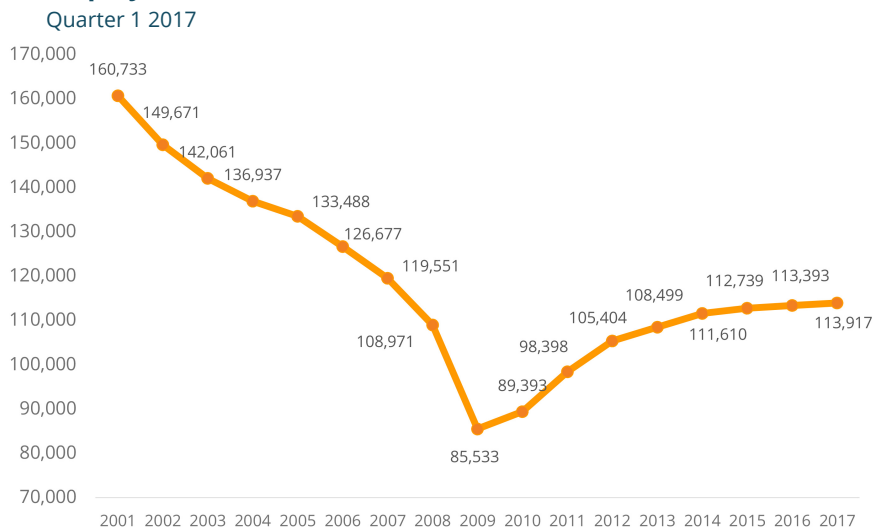
Employment Analysis

Skilled Trades occupations employed 113,917 workers in 2017, the greatest number in the last eight years. Following the recession, 28,384 jobs have been recovered. Employment growth has been consistent but not rapid. Another 47,000 workers must be hired for employment to reach pre-recession peaks.

Online Job Postings



Employment Over Time





5,947 online job ads, a new peak demand

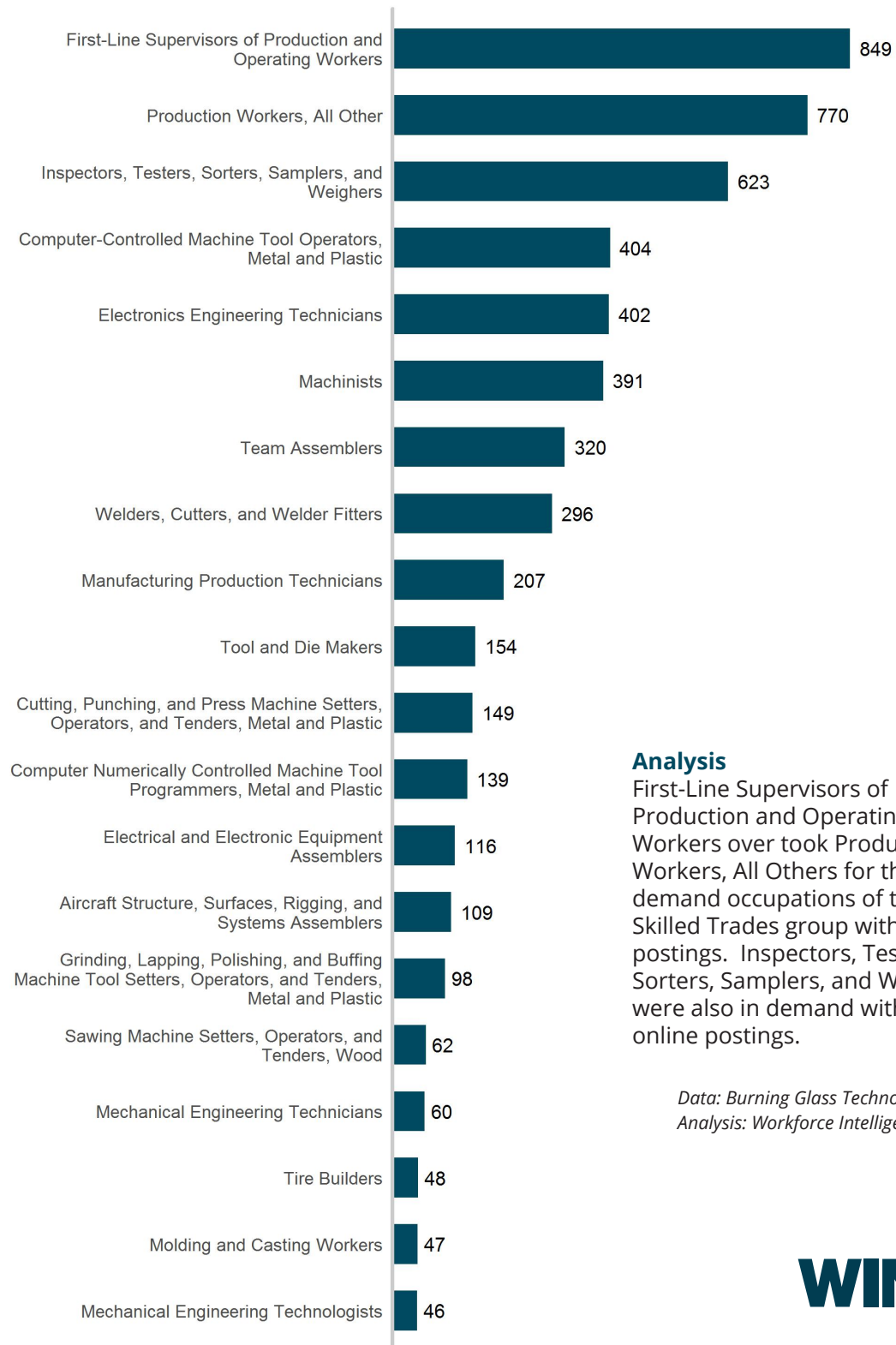


Average Advertised Wage:
\$38,487

Skilled Trades & Technicians

Top Jobs Posted

Quarter 1 2017



Analysis

First-Line Supervisors of Production and Operating Workers overtook Production Workers, All Others for the top in-demand occupations of the Skilled Trades group with 849 postings. Inspectors, Testers, Sorters, Samplers, and Weighers were also in demand with 623 online postings.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Skills in demand: Repair, Computer Numerical Control (CNC), Machining

70%

of skilled trades job ads were for full-time workers

Skilled Trades & Technicians Educational Attainment Required

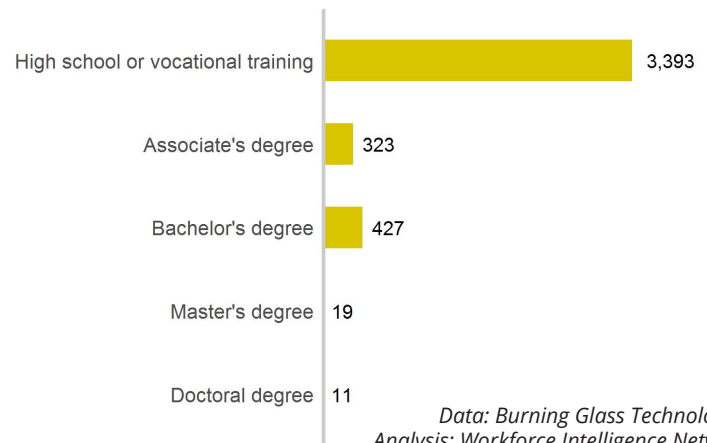
Most positions in the Skilled Trades and Technicians occupation group require specialized vocational training. Employers and employment agencies have expressed that a certificate, registered apprenticeship, or other specialized training is often required for employment. About 57 percent of skilled trades postings cited a high school diploma as the minimum required education, while 13.1 percent of the postings required an associate's, bachelor's, or more advanced degree. These postings may represent management positions in fields employing skilled trades.

Jobs are open to those with little experience, and 89 percent of postings that specify desired experience required fewer than five years. Employers are interested in hiring entry-level workers as well as more experienced workers with three to five years of experience.

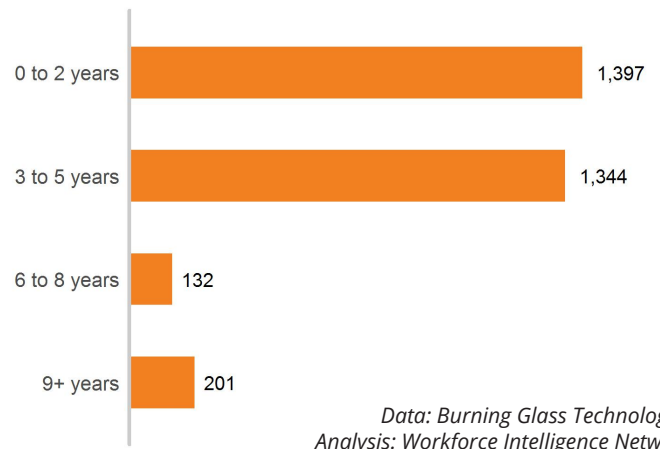
In-Demand Areas of Study

- Engineering, General
- Mechanical Engineering
- Electrical and Electronic Engineering Technologies/Technicians, other
- Business Administration and Management, general
- Automotive Engineering Technology/Technician

Educational Attainment



Experience Required





Commercial Driver's License and
Welding Certification demanded

57%

of skilled trades postings require
only some vocational training

Skilled Trades & Technicians In-Demand Skills

Workers in Skilled Trade and Technician positions must have a combination of technical and foundational skills. Employers during Q1 2017 were most interested in skills such as inspection, CNC machining, repair, and welding. Mathematics skills are also sought after. Foundational skills that are important to employers include communication, organizations, attention to detail, and problem solving. These jobs also have a degree of physical demand.

Technical In-Demand Skills

- Inspection, repair
- Computer Numerical Control (CNC)
- Machining
- Scheduling
- Welding

Foundational In-Demand Skills

- Communication Skills
- Ability to perform physical labor
- Mathematics
- Troubleshooting, problem solving
- Computer skills, Microsoft Office

Job Type

- Full Time-70.3% of postings
- Part Time- 1.8% of postings
- Temp-7.5% of postings

Certifications Required

- Commercial Driver's License
- Welding Certification (e.g. AWS Certified Welder)
- Forklift Operator Certification
- Project Manager Certification (E.G. PMP)
- American Society for Quality (ASQ) Certification



First-line supervisors top in-demand job



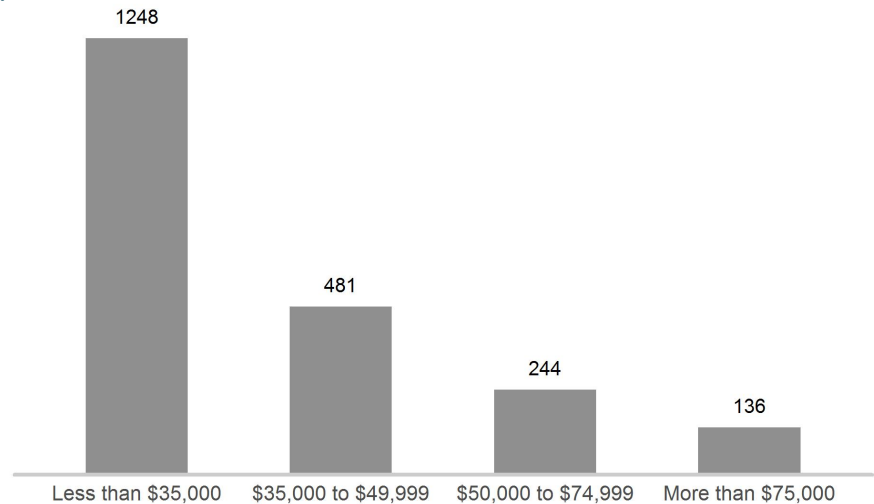
113,917 workers employed in skilled trades jobs

Skilled Trades & Technicians Wages

Nearly half of employers did not post wages or salaries in job postings for Skilled Trade and Technician workers in Q1 2017. Of those that did, 59 percent were below \$35,000. There is wage growth opportunity in many occupations in this group, especially for those working as production technicians and supervisors. The average salary posted during Q1 2017 was \$38,487.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
51-1011	First-Line Supervisors of Production and Operating Workers	\$17.40	\$22.18	\$29.48	\$38.86	\$47.50
51-9199	Production Workers, All Other	\$10.77	\$13.64	\$16.54	\$18.93	\$24.89
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.81	\$11.55	\$15.46	\$21.68	\$28.32
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$11.38	\$13.62	\$18.70	\$23.08	\$28.44
17-3023	Electronics Engineering Technicians	\$15.77	\$19.62	\$24.77	\$31.12	\$36.94
51-4041	Machinists	\$12.71	\$15.79	\$19.49	\$24.55	\$29.91
51-2092	Team Assemblers	\$10.32	\$13.24	\$17.51	\$22.85	\$27.64
51-4121	Welders, Cutters, and Welder Fitters	\$12.73	\$15.15	\$17.87	\$22.25	\$28.27
17-3029	Manufacturing Production Technicians	\$20.49	\$26.65	\$31.91	\$36.96	\$44.69
51-4111	Tool and Die Makers	\$16.99	\$21.20	\$26.38	\$32.46	\$36.25

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Transportation, Distribution, and Logistics (TDL)

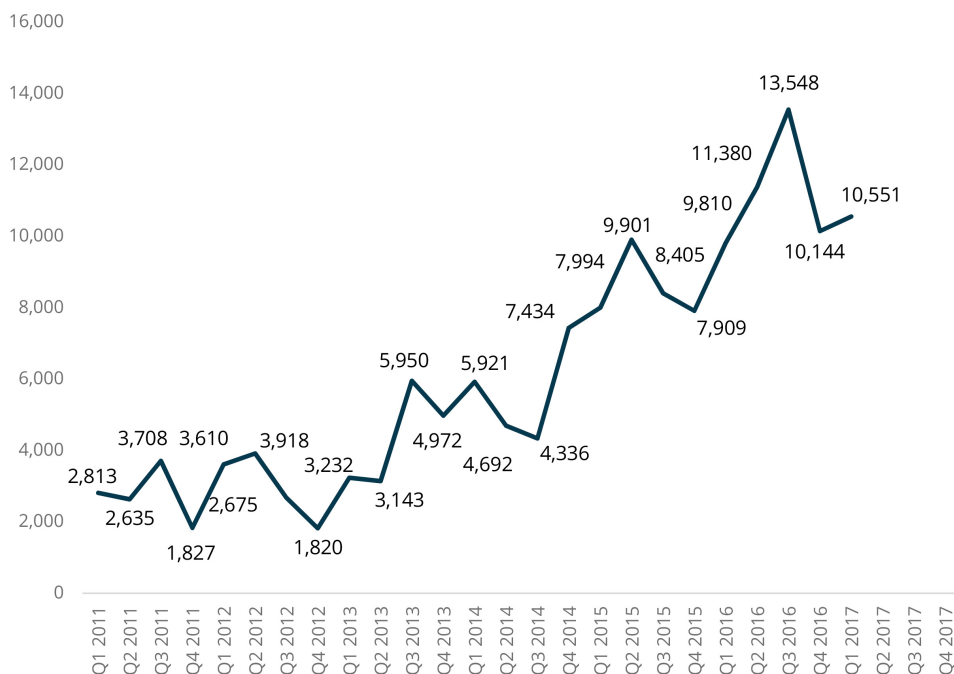
Introduction

Transportation, distribution, and logistics (TDL) workers help move materials in an efficient manner whether it is from one company to another or directly to a consumer. Logistics workers range from Materials Movers to Logistics Analysts, coordinating and analyzing material and goods movement.

Job Posting Analysis

Demand for TDL workers, specifically Truck Drivers, has made TDL among the fastest growing occupation group in terms of employer demand in recent years. In Q1 2017, there were 10,551 job postings related to TDL, four percent higher than the 10,144 postings during the previous quarter.

Online Job Postings



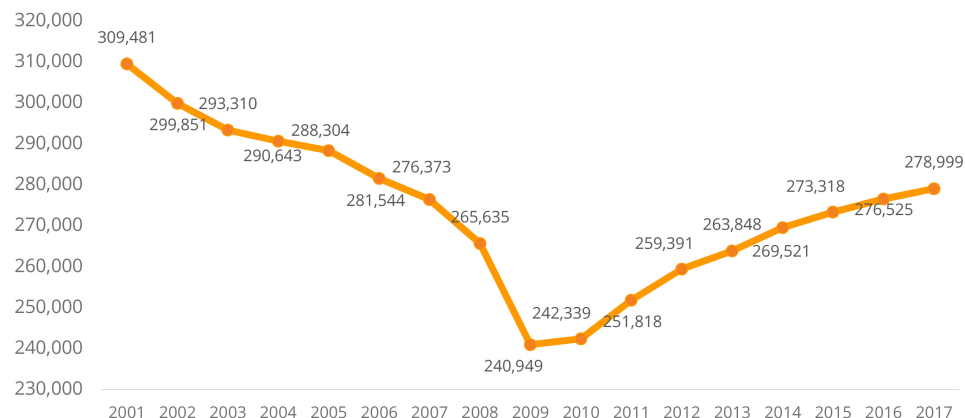
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Analysis

Employment in TDL jobs has recovered 16 percent (38,050 jobs) since 2009. While growth is positive, it is not swift and jobs have been added rapidly enough to fill employer needs. An additional 30,000 workers need to be hired for job levels to reach pre-recession peak levels.

Employment Over Time

Quarter 1 2017



Data: EMSI
Analysis: Workforce Intelligence Network



10,551 TDL job postings
during Q1 2017

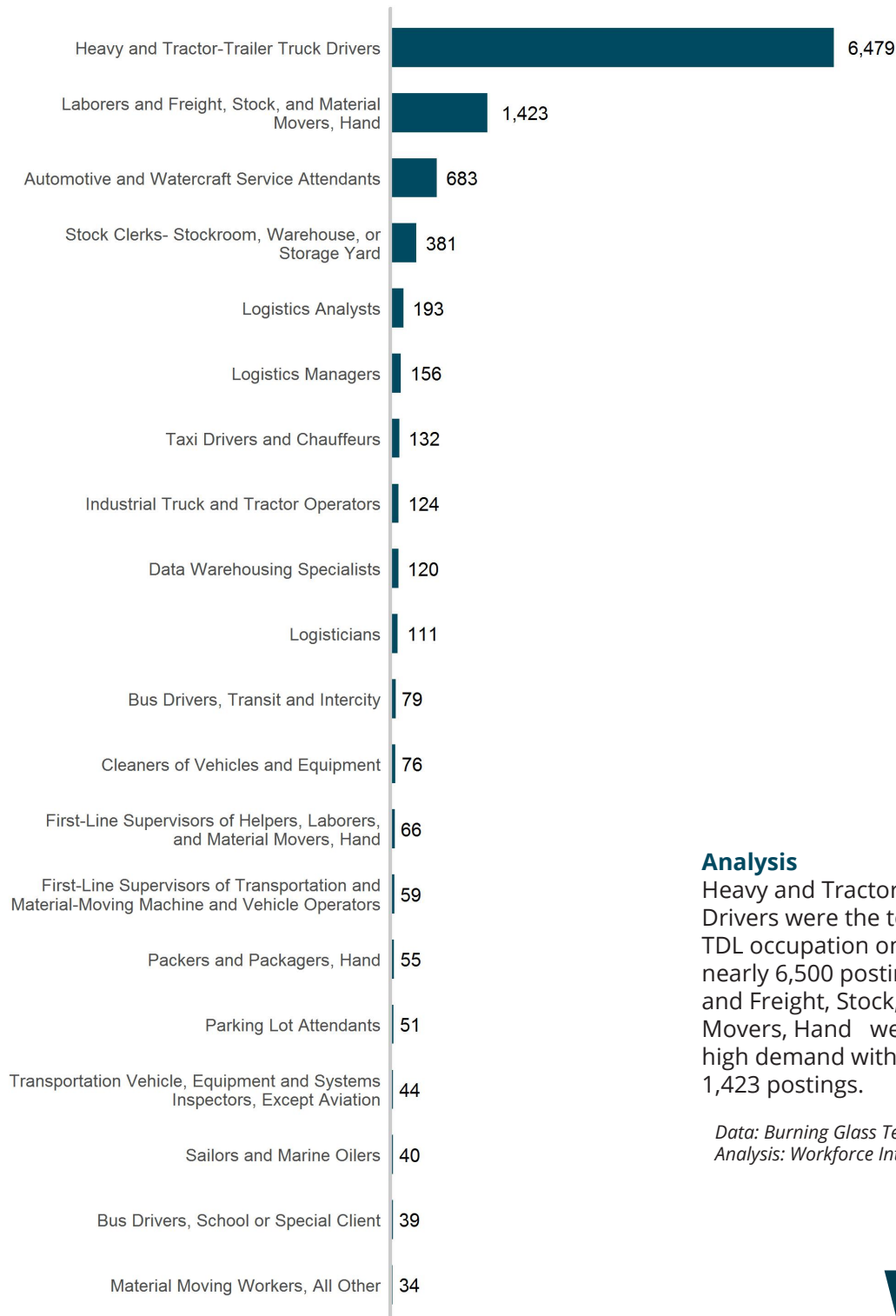


Over 6,000 Truck Driver
job positions in Q1 2017

Transportation, Distribution, and Logistics (TDL)

Top Jobs Posted

Quarter 1 2017



Analysis

Heavy and Tractor-Trailer Truck Drivers were the top in-demand TDL occupation once again with nearly 6,500 postings. Laborers and Freight, Stock, and Material Movers, Hand were also in high demand with slightly over 1,423 postings.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



278,999 TDL workers in
Southeast Michigan



Average advertised salary:
\$64,348

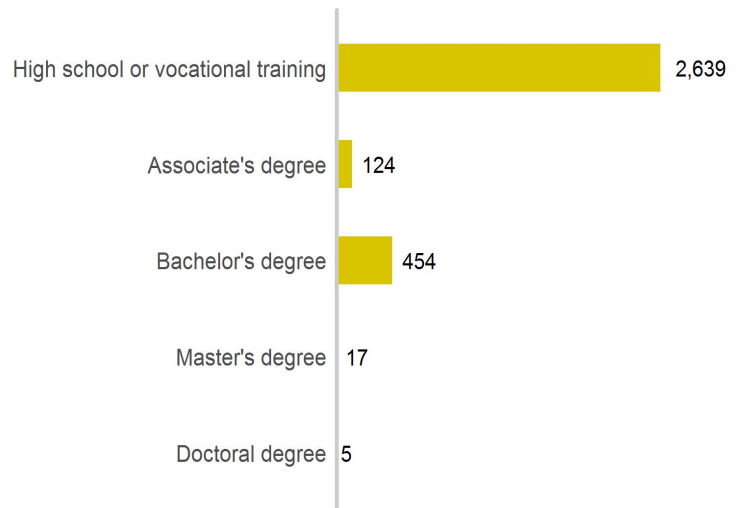
Transportation, Distribution, and Logistics (TDL) Educational Attainment Required

Many TDL jobs require specialized training and certifications for employment. This is prevalent from the 2,639 postings searching for applicants with some vocational training. Jobs in Management and Logistics Analytics often require a bachelor's degree.

TDL employers have many open positions considered entry level (zero to two years of experience). More experienced individuals are in demand for managerial positions along the supply chain.

The most common degrees cited are Business, Logistics, Engineering, and Programming. This likely indicates postings for jobs in management and logistics positions involved in coordinating and managing the work of front-line workers such as Drivers and Material Handlers.

Educational Attainment

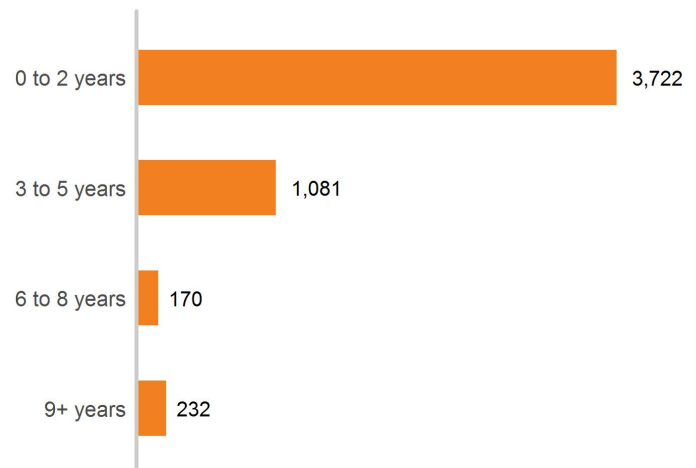


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

In-Demand Areas of Study

- Business Administration and Management, General
- Logistics, materials, and Supply Chain Management
- Engineering, General
- Computer Science
- Mechanical Engineering

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Entry-level work available
to job seekers

%

32% of job ads offer
full-time work

Transportation, Distribution, and Logistics (TDL) In-Demand Skills

While TDL workers require a range of skills for employment, over 70 percent of job postings did not note specific required skills. Truck Drivers must be able to perform repair and maintenance of their vehicles, in addition to work with other tools and machinery such as forklifts. Driving also requires a degree of physical demand, and communications skills are also valued. Jobs in logistics require strong mathematics and computer skills.

Technical In-Demand Skills

- Inspection, Repair
- Customer Service
- Forklift Operation
- Computer Skills, Microsoft Office
- Logistics

Foundational In-Demand Skills

- Communication Skills
- Ability to perform physical tasks
- Organizational Skills
- Writing, Detail Oriented
- Mathematics

Job Type

- Full Time- 31.5%
- Part Time- 4.4%
- Temp- 4.1%

Certifications Required

- CDL Class A
- Commercial Driver's License
- Automotive Service Excellence (ASE) Certification
- Forklift Operator Certification
- CDL Class B



Skills in-demand: inspection and repair



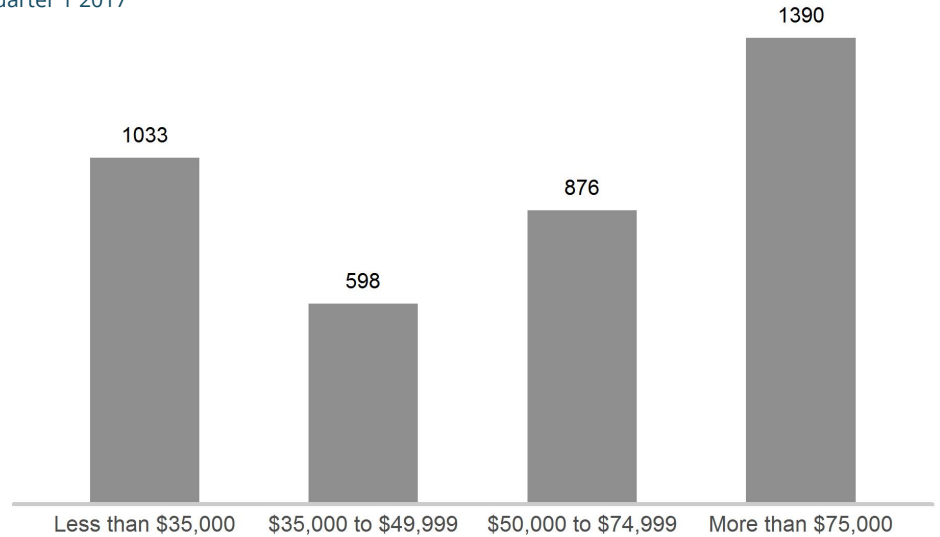
Commercial driver's license in high demand

Transportation, Distribution, and Logistics (TDL) Wages

Wages for TDL workers vary depending on the jobs. Most jobs offer wages above \$50,000 or below \$35,000 with little in between. Among the higher paying positions are those in Logistics or Truck Driving, which are in high demand and require training and/or higher education. Lower wage jobs include those in Materials Movement. The average advertised wage in postings during Q1 2017 was \$64,348, indicating a mix of high-skill and low-skill jobs. Nearly 1,400 positions posted offer wages over \$75,000.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
53-3032	Heavy and Tractor-Trailer Truck Drivers	\$13.21	\$15.77	\$19.06	\$23.52	\$28.79
53-7062	Laborers and Freight, Stock, and Material Movers, Hand	\$9.33	\$10.65	\$13.16	\$16.63	\$20.86
53-6031	Automotive and Watercraft Service Attendants	\$8.55	\$8.97	\$9.81	\$11.58	\$13.37
43-5081	Stock Clerks- Stockroom, Warehouse, or Storage Yard	\$8.61	\$9.06	\$10.58	\$14.07	\$18.17
13-1081	Logistics Analysts	\$23.56	\$30.80	\$40.71	\$48.65	\$56.46
11-3071	Logistics Managers	\$28.66	\$35.82	\$45.43	\$58.33	\$70.42
53-3041	Taxi Drivers and Chauffeurs	\$8.28	\$8.85	\$9.72	\$11.41	\$13.87
53-7051	Industrial Truck and Tractor Operators	\$10.39	\$12.43	\$15.46	\$21.09	\$24.96
15-1199	Data Warehousing Specialists	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
13-1081	Logisticians	\$23.56	\$30.80	\$40.71	\$48.65	\$56.46

Data: EMSI, BLS
Analysis: Workforce Intelligence Network

Annual Labor Market Data

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 Annual	2016 Annual	2017 Annual (Thru 1st Quarter)	Change from 2016	Percent Change from 2016
Labor Force	2,748,569	2,674,603	2,675,835	2,707,407	2,709,990	2,705,375	2,755,253	2,778,325	23,072	0.8%
Employment	2,380,682	2,382,010	2,417,900	2,454,572	2,499,390	2,551,546	2,612,592	2,634,084	21,491	0.8%
Unemployment	367,888	292,593	257,935	252,835	210,601	153,829	142,661	144,242	1,581	1.1%
Unemployment Rate	13.4%	10.9%	9.6%	9.3%	7.8%	5.7%	5.2%	5.2%	0.0%	na

**Note: Monthly data averaged by year*

Data: Bureau of Labor Statistics

Quarterly Labor Market Data

	1st Quarter 2016	2nd Quarter 2016	3rd Quarter	4th Quarter 2016	1st Quarter 2017	Change from 4th Quarter 2016	Percent Change from 4th Quarter 2016	One-Year Change from 1st Quarter 2016	One-Year Percent Change from 1st Quarter 2016
Labor Force	2,727,938	2,743,560	2,783,520	2,765,994	2,778,325	12,331	0.4%	50,387	1.8%
Employment	2,585,074	2,609,075	2,623,523	2,632,697	2,624,882	-7,815	-0.3%	39,809	1.5%
Unemployment	142,864	134,486	159,997	133,297	153,443	20,146	15.1%	10,578	7.4%
Unemployment Rate	5.2%	4.9%	5.7%	4.8%	5.5%	0.7%	na	0.3%	na

**Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics







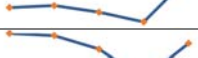




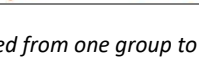
Monthly Labor Market Data

	January 2016	February 2016	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017	February 2017	March 2017
Labor Force	2,709,039	2,726,663	2,748,112	2,718,600	2,744,022	2,768,059	2,787,191	2,781,422	2,781,946	2,781,878	2,760,458	2,755,647	2,770,797	2,783,790	2,780,388
Employment	2,567,442	2,587,779	2,600,000	2,594,656	2,616,363	2,616,205	2,615,624	2,620,991	2,633,954	2,632,527	2,636,540	2,629,025	2,606,480	2,623,865	2,644,302
Unemployment	141,597	138,884	148,112	123,944	127,659	151,854	171,567	160,431	147,992	149,351	123,918	126,622	164,317	159,925	136,086
Unemployment Rate	5.2%	5.1%	5.4%	4.6%	4.7%	5.5%	6.2%	5.8%	5.3%	5.4%	4.5%	4.6%	5.9%	5.7%	4.9%

** Note: Data shown for 15 most recently available months*

Data: Bureau of Labor Statistics







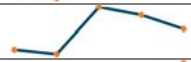










Job Posting Data by Occupation Group* Over Time

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
Total Postings	143,199	139,765	149,379	141,413	160,628		12.2%	14.9%
Agriculture	1,980	1,835	1,776	1,660	2,447		23.6%	33.4%
Business & finance	9,628	9,011	9,044	9,335	9,966		3.5%	10.6%
Construction	1,238	1,281	1,492	1,219	1,238		0.0%	-3.4%
Customer service	37,788	30,303	34,218	33,345	35,398		-6.3%	16.8%
Education	2,110	2,114	3,034	3,150	2,613		23.8%	23.6%
Energy	268	272	259	240	328		22.4%	20.6%
Engineers & designers	9,534	9,454	8,977	7,941	9,180		-3.7%	-2.9%
Health care	19,449	17,880	20,099	19,607	25,381		30.5%	42.0%
Information technology	16,695	17,335	16,966	14,646	16,083		-3.7%	-7.2%
Skilled trades & technicians	5,090	4,503	4,755	4,797	5,947		16.8%	32.1%
Transportation, distribution, and logistics	9,810	11,380	13,548	10,144	10,551		7.6%	-7.3%

**Note: Some overlap exists between groups, the occupational groups are not mutually exclusive. Thus, postings should not be added from one group to another but instead should be analyzed on their own.*


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Total Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	143,199	139,765	149,379	141,413	160,628	100.0%		12.2%	14.9%
Detroit	29,296	28,456	29,905	27,288	28,238	17.6%		-3.6%	-0.8%
Genesee & Shiawassee	5,711	5,631	6,667	6,261	7,102	4.4%		24.4%	26.1%
Hillsdale & Lenawee	1,678	1,606	2,329	1,848	1,952	1.2%		16.3%	21.5%
Jackson	2,557	2,181	2,618	2,634	3,432	2.1%		34.2%	57.4%
Livingston	2,472	2,162	2,727	2,545	2,692	1.7%		8.9%	24.5%
Macomb	14,754	14,257	15,085	14,694	18,850	11.7%		27.8%	32.2%
Monroe	1,841	1,694	3,196	2,940	2,494	1.6%		35.5%	47.2%
Oakland	45,418	43,058	42,873	40,027	48,075	29.9%		5.9%	11.7%
St. Clair	1,730	1,788	2,259	2,163	2,297	1.4%		32.8%	28.5%
Thumb Area	1,673	1,598	1,783	1,608	1,919	1.2%		14.7%	20.1%
Washtenaw	11,951	11,020	11,232	11,328	12,912	8.0%		8.0%	17.2%
Wayne	55,886	54,770	58,610	55,365	58,903	36.7%		5.4%	7.5%
Outer Wayne	26,590	26,314	28,705	28,077	30,665	19.1%		15.3%	16.5%
Prosperity Region 6	9,114	9,017	10,709	10,032	11,318	7.0%		24.2%	25.5%
Prosperity Region 9	20,499	18,663	22,102	21,295	23,482	14.6%		14.6%	25.8%
Prosperity Region 10	116,058	112,085	116,568	110,086	125,828	78.3%		8.4%	12.3%

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Agriculture Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	1,980	1,835	1,776	1,660	2,447	100.0%		23.6%	33.4%
Detroit	353	384	351	384	386	15.8%		9.3%	0.5%
Genesee & Shiawassee	75	94	86	82	66	2.7%		-12.0%	-29.8%
Hillsdale & Lenawee	28	18	26	10	29	1.2%		3.6%	61.1%
Jackson	47	33	19	27	48	2.0%		2.1%	45.5%
Livingston	28	61	51	36	66	2.7%		135.7%	8.2%
Macomb	188	187	149	183	315	12.9%		67.6%	68.4%
Monroe	25	24	30	29	31	1.3%		24.0%	29.2%
Oakland	622	520	534	435	684	28.0%		10.0%	31.5%
St. Clair	40	33	20	20	42	1.7%		5.0%	27.3%
Thumb Area	40	28	30	15	53	2.2%		32.5%	89.3%
Washtenaw	223	197	175	173	220	9.0%		-1.3%	11.7%
Wayne	664	640	656	650	817	33.4%		23.0%	27.7%
Outer Wayne	311	256	305	266	431	17.6%		38.6%	68.4%
Prosperity Region 6	155	155	136	117	161	6.6%		3.9%	3.9%
Prosperity Region 9	351	333	301	275	394	16.1%		12.3%	18.3%
Prosperity Region 10	1,474	1,347	1,339	1,268	1,816	74.2%		23.2%	34.8%







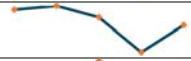










Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Business and Finance Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	9,628	9,011	9,044	9,335	9,966	100.0%		3.5%	10.6%
Detroit	2,393	2,300	2,411	2,310	2,276	22.8%		-4.9%	-1.0%
Genesee & Shiawassee	242	185	171	255	259	2.6%		7.0%	40.0%
Hillsdale & Lenawee	51	55	55	65	97	1.0%		90.2%	76.4%
Jackson	139	133	155	196	200	2.0%		43.9%	50.4%
Livingston	111	95	108	105	103	1.0%		-7.2%	8.4%
Macomb	734	587	645	701	903	9.1%		23.0%	53.8%
Monroe	141	112	169	172	175	1.8%		24.1%	56.3%
Oakland	3,379	3,273	3,017	3,053	3,364	33.8%		-0.4%	2.8%
St. Clair	68	72	89	115	74	0.7%		8.8%	2.8%
Thumb Area	57	39	40	51	41	0.4%		-28.1%	5.1%
Washtenaw	775	684	689	737	747	7.5%		-3.6%	9.2%
Wayne	3,931	3,776	3,906	3,884	4,003	40.2%		1.8%	6.0%
Outer Wayne	1,538	1,476	1,495	1,574	1,727	17.3%		12.3%	17.0%
Prosperity Region 6	367	296	300	421	374	3.8%		1.9%	26.4%
Prosperity Region 9	1,217	1,079	1,176	1,275	1,322	13.3%		8.6%	22.5%
Prosperity Region 10	8,044	7,636	7,568	7,638	8,270	83.0%		2.8%	8.3%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Construction Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	1,238	1,281	1,492	1,219	1,238	100.0%		0.0%	-3.4%
Detroit	197	215	261	253	235	19.0%		19.3%	9.3%
Genesee & Shiawassee	64	87	89	45	88	7.1%		37.5%	1.1%
Hillsdale & Lenawee	26	13	32	13	24	1.9%		-7.7%	84.6%
Jackson	50	29	43	23	33	2.7%		-34.0%	13.8%
Livingston	62	48	40	45	43	3.5%		-30.6%	-10.4%
Macomb	151	176	184	162	241	19.5%		59.6%	36.9%
Monroe	30	31	28	19	26	2.1%		-13.3%	-16.1%
Oakland	298	329	414	311	376	30.4%		26.2%	14.3%
St. Clair	8	16	24	11	15	1.2%		87.5%	-6.3%
Thumb Area	104	33	36	31	29	2.3%		-72.1%	-12.1%
Washtenaw	146	132	100	80	91	7.4%		-37.7%	-31.1%
Wayne	371	387	502	479	506	40.9%		36.4%	30.7%
Outer Wayne	174	172	241	226	271	21.9%		55.7%	57.6%
Prosperity Region 6	176	136	149	87	132	10.7%		-25.0%	-2.9%
Prosperity Region 9	314	253	243	180	217	17.5%		-30.9%	-14.2%
Prosperity Region 10	820	892	1,100	952	1,123	90.7%		37.0%	25.9%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Customer Service Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	37,788	30,303	34,218	33,345	35,398	100.0%		-6.3%	16.8%
Detroit	5,283	5,240	5,415	4,888	5,044	14.2%		-4.5%	-3.7%
Genesee & Shiawassee	1,458	1,417	1,698	1,575	1,756	5.0%		20.4%	23.9%
Hillsdale & Lenawee	363	339	464	485	467	1.3%		28.7%	37.8%
Jackson	492	465	560	572	767	2.2%		55.9%	64.9%
Livingston	669	665	857	913	942	2.7%		40.8%	41.7%
Macomb	3,406	3,260	3,792	3,749	241	0.7%		-92.9%	-92.6%
Monroe	403	414	567	675	727	2.1%		80.4%	75.6%
Oakland	10,030	9,403	10,413	9,614	10,766	30.4%		7.3%	14.5%
St. Clair	429	405	474	575	550	1.6%		28.2%	35.8%
Thumb Area	278	323	366	355	430	1.2%		54.7%	33.1%
Washtenaw	2,577	2,255	2,584	2,529	2,705	7.6%		5.0%	20.0%
Wayne	11,648	11,357	12,443	12,303	35,398	100.0%		203.9%	211.7%
Outer Wayne	6,365	6,117	7,028	7,415	30,354	85.8%		376.9%	396.2%
Prosperity Region 6	2,165	2,145	2,538	2,505	2,736	7.7%		26.4%	27.6%
Prosperity Region 9	4,504	4,138	5,032	5,174	5,608	15.8%		24.5%	35.5%
Prosperity Region 10	25,084	24,020	26,648	25,666	46,405	131.1%		85.0%	93.2%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Education Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	2,110	2,114	3,034	3,150	2,613	100.0%		23.8%	23.6%
Detroit	389	413	391	538	491	18.8%		26.2%	18.9%
Genesee & Shiawassee	205	207	257	212	242	9.3%		18.0%	16.9%
Hillsdale & Lenawee	27	29	68	61	14	0.5%		-48.1%	-51.7%
Jackson	40	45	80	60	59	2.3%		47.5%	31.1%
Livingston	17	16	43	21	18	0.7%		5.9%	12.5%
Macomb	182	161	306	337	247	9.5%		35.7%	53.4%
Monroe	16	48	58	52	28	1.1%		75.0%	-41.7%
Oakland	601	543	796	765	659	25.2%		9.7%	21.4%
St. Clair	22	13	49	8	17	0.7%		-22.7%	30.8%
Thumb Area	41	13	79	38	37	1.4%		-9.8%	184.6%
Washtenaw	194	259	347	416	332	12.7%		71.1%	28.2%
Wayne	765	780	951	1,180	960	36.7%		25.5%	23.1%
Outer Wayne	376	367	560	642	469	17.9%		24.7%	27.8%
Prosperity Region 6	268	233	385	258	296	11.3%		10.4%	27.0%
Prosperity Region 9	294	397	596	610	451	17.3%		53.4%	13.6%
Prosperity Region 10	1,548	1,484	2,053	2,282	1,866	71.4%		20.5%	25.7%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Energy Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	268	272	259	240	328	100.0%		22.4%	20.6%
Detroit	108	129	87	79	123	37.5%		13.9%	-4.7%
Genesee & Shiawassee	44	49	0	1	6	1.8%		-86.4%	-87.8%
Hillsdale & Lenawee	1	0	0	0	1	0.3%		0.0%	#DIV/0!
Jackson	11	12	21	31	16	4.9%		45.5%	33.3%
Livingston	5	4	0	0	2	0.6%		-60.0%	-50.0%
Macomb	5	17	4	6	16	4.9%		220.0%	-5.9%
Monroe	45	26	93	55	60	18.3%		33.3%	130.8%
Oakland	8	7	3	9	15	4.6%		87.5%	114.3%
St. Clair	12	5	7	12	34	10.4%		183.3%	580.0%
Thumb Area	2	2	5	5	7	2.1%		250.0%	250.0%
Washtenaw	4	4	5	7	7	2.1%		75.0%	75.0%
Wayne	131	145	121	114	164	50.0%		25.2%	13.1%
Outer Wayne	23	16	34	35	41	12.5%		78.3%	156.3%
Prosperity Region 6	58	56	12	18	47	14.3%		-19.0%	-16.1%
Prosperity Region 9	66	46	119	93	86	26.2%		30.3%	87.0%
Prosperity Region 10	144	169	128	129	195	59.5%		35.4%	15.4%

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Engineers & Designers Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	9,534	9,454	8,977	7,941	9,180	100.0%		-3.7%	-2.9%
Detroit	1,130	1,057	1,273	977	1,001	10.9%		-11.4%	-5.3%
Genesee & Shiawassee	149	123	99	109	104	1.1%		-30.2%	-15.4%
Hillsdale & Lenawee	43	49	70	57	82	0.9%		90.7%	67.3%
Jackson	130	135	142	162	129	1.4%		-0.8%	-4.4%
Livingston	90	44	85	62	66	0.7%		-26.7%	50.0%
Macomb	1,311	1,181	1,108	1,102	1,720	18.7%		31.2%	45.6%
Monroe	107	76	187	123	95	1.0%		-11.2%	25.0%
Oakland	3,973	4,039	3,493	3,115	3,827	41.7%		-3.7%	-5.2%
St. Clair	56	59	70	86	79	0.9%		41.1%	33.9%
Thumb Area	34	36	25	26	22	0.2%		-35.3%	-38.9%
Washtenaw	512	480	374	372	465	5.1%		-9.2%	-3.1%
Wayne	3,129	3,232	3,324	2,727	2,591	28.2%		-17.2%	-19.8%
Outer Wayne	1,999	2,175	2,051	1,750	1,590	17.3%		-20.5%	-26.9%
Prosperity Region 6	239	218	194	221	205	2.2%		-14.2%	-6.0%
Prosperity Region 9	882	784	858	776	837	9.1%		-5.1%	6.8%
Prosperity Region 10	8,413	8,452	7,925	6,944	8,138	88.6%		-3.3%	-3.7%











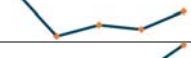





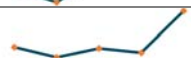
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Health Care Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	19,449	17,880	20,099	19,607	25,381	100.0%		30.5%	42.0%
Detroit	5,228	5,123	5,403	5,131	5,702	22.5%		9.1%	11.3%
Genesee & Shiawassee	925	976	1,197	1,203	1,589	6.3%		71.8%	62.8%
Hillsdale & Lenawee	279	199	234	213	278	1.1%		-0.4%	39.7%
Jackson	405	242	305	269	488	1.9%		20.5%	101.7%
Livingston	238	210	261	269	309	1.2%		29.8%	47.1%
Macomb	1,996	1,839	2,055	1,999	3,081	12.1%		54.4%	67.5%
Monroe	176	110	647	550	254	1.0%		44.3%	130.9%
Oakland	4,777	4,205	4,291	4,295	5,802	22.9%		21.5%	38.0%
St. Clair	387	365	466	480	598	2.4%		54.5%	63.8%
Thumb Area	413	271	306	292	347	1.4%		-16.0%	28.0%
Washtenaw	1,696	1,614	1,778	1,926	2,444	9.6%		44.1%	51.4%
Wayne	8,272	7,849	8,559	8,111	10,191	40.2%		23.2%	29.8%
Outer Wayne	3,044	2,726	3,156	2,980	4,489	17.7%		47.5%	64.7%
Prosperity Region 6	1,725	1,612	1,969	1,975	2,534	10.0%		46.9%	57.2%
Prosperity Region 9	2,794	2,375	3,225	3,227	3,773	14.9%		35.0%	58.9%
Prosperity Region 10	15,045	13,893	14,905	14,405	19,074	75.2%		26.8%	37.3%

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Health Care Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	19,449	17,880	20,099	19,607	25,381	100.0%		30.5%	42.0%
Detroit	5,228	5,123	5,403	5,131	5,702	22.5%		9.1%	11.3%
Genesee & Shiawassee	925	976	1,197	1,203	1,589	6.3%		71.8%	62.8%
Hillsdale & Lenawee	279	199	234	213	278	1.1%		-0.4%	39.7%
Jackson	405	242	305	269	488	1.9%		20.5%	101.7%
Livingston	238	210	261	269	309	1.2%		29.8%	47.1%
Macomb	1,996	1,839	2,055	1,999	3,081	12.1%		54.4%	67.5%
Monroe	176	110	647	550	254	1.0%		44.3%	130.9%
Oakland	4,777	4,205	4,291	4,295	5,802	22.9%		21.5%	38.0%
St. Clair	387	365	466	480	598	2.4%		54.5%	63.8%
Thumb Area	413	271	306	292	347	1.4%		-16.0%	28.0%
Washtenaw	1,696	1,614	1,778	1,926	2,444	9.6%		44.1%	51.4%
Wayne	8,272	7,849	8,559	8,111	10,191	40.2%		23.2%	29.8%
Outer Wayne	3,044	2,726	3,156	2,980	4,489	17.7%		47.5%	64.7%
Prosperity Region 6	1,725	1,612	1,969	1,975	2,534	10.0%		46.9%	57.2%
Prosperity Region 9	2,794	2,375	3,225	3,227	3,773	14.9%		35.0%	58.9%
Prosperity Region 10	15,045	13,893	14,905	14,405	19,074	75.2%		26.8%	37.3%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Information Technology Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	16,695	17,335	16,966	14,646	16,083	100.0%		-3.7%	-7.2%
Detroit	4,207	4,285	4,375	3,795	3,711	23.1%		-11.8%	-13.4%
Genesee & Shiawassee	168	208	223	174	189	1.2%		12.5%	-9.1%
Hillsdale & Lenawee	40	32	67	40	41	0.3%		2.5%	28.1%
Jackson	145	124	154	178	171	1.1%		17.9%	37.9%
Livingston	84	70	95	72	79	0.5%		-6.0%	12.9%
Macomb	992	1,336	1,300	1,104	1,547	9.6%		55.9%	15.8%
Monroe	47	70	95	101	106	0.7%		125.5%	51.4%
Oakland	6,471	6,100	5,712	5,039	5,991	37.3%		-7.4%	-1.8%
St. Clair	29	41	41	32	45	0.3%		55.2%	9.8%
Thumb Area	14	20	33	23	21	0.1%		50.0%	5.0%
Washtenaw	1,606	1,499	1,207	1,255	1,530	9.5%		-4.7%	2.1%
Wayne	6,931	7,835	8,018	6,628	6,363	39.6%		-8.2%	-18.8%
Outer Wayne	2,724	3,550	3,643	2,833	2,652	16.5%		-2.6%	-25.3%
Prosperity Region 6	211	269	297	229	255	1.6%		20.9%	-5.2%
Prosperity Region 9	1,922	1,795	1,618	1,646	1,927	12.0%		0.3%	7.4%
Prosperity Region 10	14,394	15,271	15,030	12,771	13,901	86.4%		-3.4%	-9.0%


















Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Skilled Trade & Technician Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	5,090	4,503	4,755	4,797	5,947	100.0%		16.8%	32.1%
Detroit	439	446	494	460	502	8.4%		14.4%	12.6%
Genesee & Shiawassee	247	167	201	265	253	4.3%		2.4%	51.5%
Hillsdale & Lenawee	114	174	110	114	119	2.0%		4.4%	-31.6%
Jackson	109	112	103	129	157	2.6%		44.0%	40.2%
Livingston	224	143	224	161	165	2.8%		-26.3%	15.4%
Macomb	869	820	771	784	1,042	17.5%		19.9%	27.1%
Monroe	101	95	115	102	120	2.0%		18.8%	26.3%
Oakland	1,429	1,354	1,263	1,225	1,569	26.4%		9.8%	15.9%
St. Clair	66	85	126	109	108	1.8%		63.6%	27.1%
Thumb Area	129	92	135	156	171	2.9%		32.6%	85.9%
Washtenaw	387	286	290	296	338	5.7%		-12.7%	18.2%
Wayne	1,415	1,295	1,419	1,456	1,664	28.0%		17.6%	28.5%
Outer Wayne	976	849	925	996	1,162	19.5%		19.1%	36.9%
Prosperity Region 6	442	344	462	530	532	8.9%		20.4%	54.7%
Prosperity Region 9	935	810	842	802	899	15.1%		-3.9%	11.0%
Prosperity Region 10	3,713	3,469	3,453	3,465	4,275	71.9%		15.1%	23.2%

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Transportation, Distribution, and Logistics Job Postings: WIN Partnership

	Q1 2016	Q2 2016	Q3 2016	Q4 2016	Q1 2017	Share of Q1 2017 Total	Change Over Time	Annual Change Q1 2016-Q1 2017	Quarter Growth Q4 2016-Q1 2017
WIN-Region Total	9,810	11,380	13,548	10,144	10,551	100.0%		7.6%	-7.3%
Detroit	1,780	1,652	1,704	1,541	1,339	12.7%		-24.8%	-18.9%
Genesee & Shiawassee	607	732	930	503	488	4.6%		-19.6%	-33.3%
Hillsdale & Lenawee	290	418	804	282	288	2.7%		-0.7%	-31.1%
Jackson	325	340	456	227	239	2.3%		-26.5%	-29.7%
Livingston	210	307	388	195	194	1.8%		-7.6%	-36.8%
Macomb	1,195	1,365	1,533	1,202	1,377	13.1%		15.2%	0.9%
Monroe	249	353	644	340	275	2.6%		10.4%	-22.1%
Oakland	1,856	2,269	2,390	2,030	2,196	20.8%		18.3%	-3.2%
St. Clair	212	305	463	234	200	1.9%		-5.7%	-34.4%
Thumb Area	273	385	412	200	282	2.7%		3.3%	-26.8%
Washtenaw	491	646	687	434	419	4.0%		-14.7%	-35.1%
Wayne	4,102	4,260	4,841	4,398	4,593	43.5%		12.0%	7.8%
Outer Wayne	2,322	2,608	3,137	2,857	3,254	30.8%		40.1%	24.8%
Prosperity Region 6	1,092	1,422	1,805	937	970	9.2%		-11.2%	-31.8%
Prosperity Region 9	1,565	2,064	2,979	1,478	1,415	13.4%		-9.6%	-31.4%
Prosperity Region 10	7,153	7,894	8,764	7,630	8,166	77.4%		14.2%	3.4%

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Analysis: Workforce Intelligence Network

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