

Q1 2017
January - March 2017

MACOMB COUNTY

WIN Labor Market Report





Introduction: Macomb County

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 Macomb County with special sections devoted to 5 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:

- Business and Finance (page 6)
- Engineers and Designers, Manufacturing Focused (page 11)
- Health Care (page 16)
- Information Technology (page 21)
- Skilled Trades and Technicians, Manufacturing Focused (page 26)

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



Introduction: Macomb County

2016 Year in Review

Overall job postings remained steady around 14,750 postings through 2016, but experienced a huge jump during Q1 2017. This growth from 14,754 ads to 18,850 brought a 28 percent increase. Specific occupation groups varied somewhat in demand, although in general unremarkable 2016 performance was followed by a strong Q1 2017. Business and Finance postings declined between Q1 and Q2, but increased consistently for the rest of the year, a 23 percent increase between 734 postings and 903. Engineers and Designers decreased slightly each quarter of 2016, a 16 percent loss, but exploded again into Q1 2017. This jump resulted in a 31 percent demand increase between Q1 2016 and Q1 2017. Health care job postings varied around 2,000 ads during Q1 2016 followed by a 54.4 percent increase into Q1 2017 for a total of 3,081 ads. Employer demand for Information technology jobs reached an initial peak of 1,336 postings in Q2 2016 followed by a slight decline, but increased an overall 56 percent to 1,547 postings during Q1 2017. Skilled trades occupations began 2016 with 869 online job ads, but saw decreases through Q3 2016. A slight improvement into Q4 was followed by another large increase into Q1 2017, and overall demand in this group rose 20 percent moving into 2017.

The labor force in Macomb County increased two percent over the course of 2016, gaining 8,739 individuals for a total of 435,242. Employment peaked in Q3 2016, but remained fairly steady for the rest of the year. Overall, an additional 7,501 workers were employed between Q1 2016 and Q1 2017, a 1.9 percent increase. Given this slight discrepancy in labor force and employment increases during 2016, the annual unemployment rate decreased by 0.1 percentage points while the quarterly unemployment rate increased by 0.2 points.

Key Findings for Q1 2017

Labor market continues to gain strength in Macomb County.

The level of employment of Macomb County residents continues to increase going into Q1 2017. This can be attributed to growth in occupation groups and increasing number of job postings. With the level of employment increasing at a faster rate than the labor force in Macomb County, the county experience a decrease in the number of unemployed Macomb County residents.

All of occupation groups saw increase in online job postings.

All the Macomb County occupation groups experienced an increase in online job postings in Q1 2017. Each of the occupation groups featured new highs during Q1 2017 compared to previous quarters in the number of job postings. The Health Care group experienced the largest increase in postings.

Registered Nurses and Truck Drivers highest in-demand occupations.

Recently, Registered Nurses and Truck Drivers witnessed increases in demand, overtaking Retail Salespersons as the top in-demand job within the county. A larger push for Registered Nurses has been observed lately throughout the country.

The Engineering and Designers occupation group reported highest advertised average salary.

The average advertised salary for the engineers and designers occupation group was \$75,000 during Q1 2017. This is 120 percent greater than the state's median earnings of \$34,000. Additionally, Mechanical and Electrical Engineers saw postings increase. See page 12 for more details.

Majority of Employers in most occupation groups look for 3-5 years of experience.

Within the occupation groups analyzed in this report a majority of postings were looking for 3-5 years of experience. The only group to not share this characteristic was health care which sought out those with 0-2 years of experience, showing a push for entry level within the health care field.

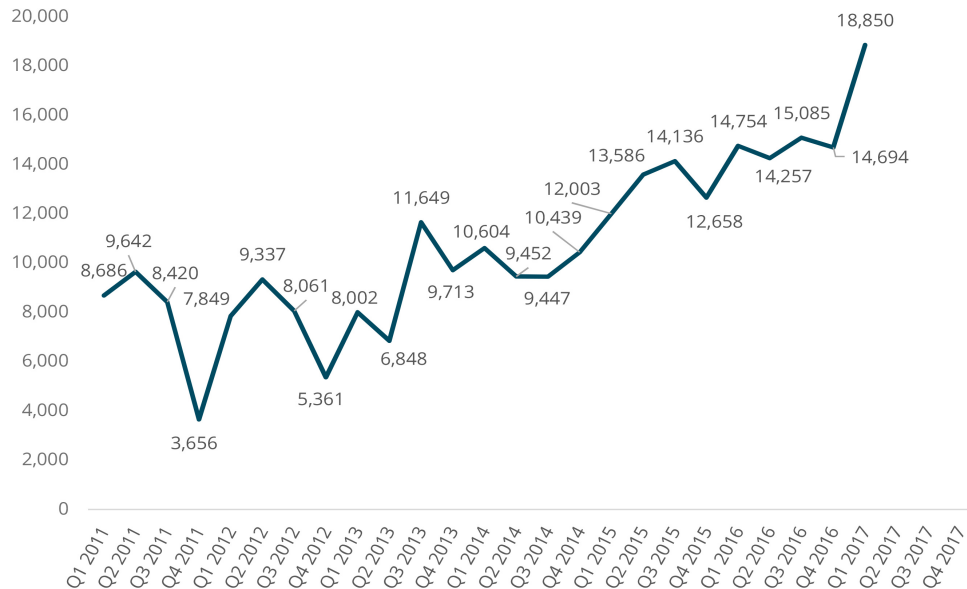


Workforce and Employer Demand Indicators

Postings over time

In Q1 2017, Macomb County experience its largest to date total job posting. Online job ads increased by 4,156 (28.2 percent) from 14,694 in Q4 2016 to 18,850 postings in Q1 2017. Compared to Q1 2011, the total number of job posting has increased by almost 10,000 postings per quarter in Macomb County.

WIN Region Online Job Postings



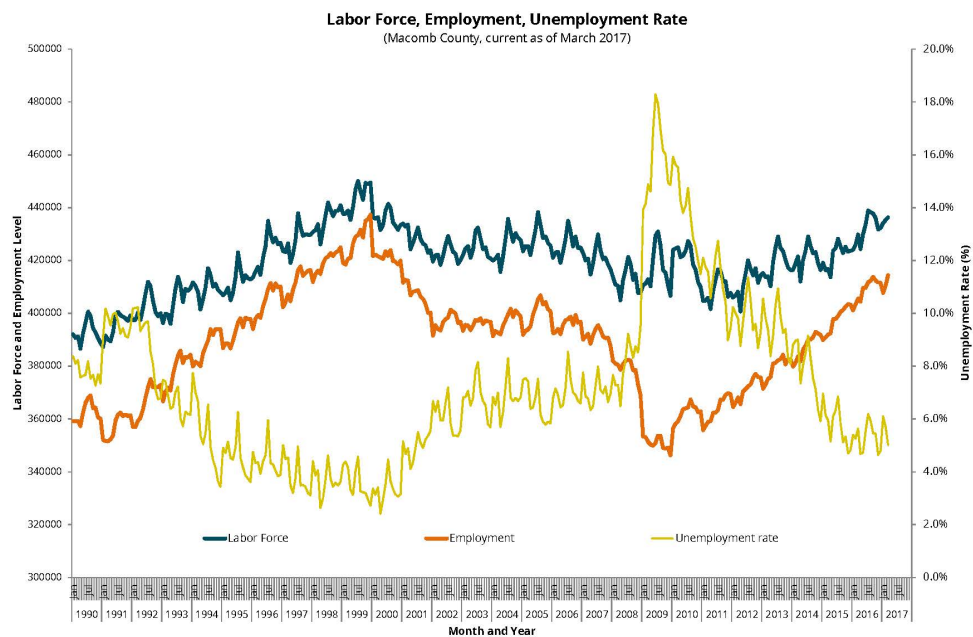
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Labor force/employment/unemployment

The labor force in Macomb County increased by 1,902 individuals (+0.4 percent) to 435,242 in Q1 2017. Employment also increased by 0.2 percent to 412,398. Since the labor force increased more than employment, unemployment did increase about 0.6 percentage points to 5.6 percent. Labor force growth is an encouraging sign related to the health of Macomb's economy. Compared to 2016, the labor force increased by 3,398 individuals available to work, and the number of residents in Macomb County employed increased by 3,491, thus unemployment declined by 93 Macomb County residents. Q1 2017 marks a new record level of employment in Macomb County since postings data began being recorded in 2011.

Labor Force, Employment, Unemployment Rate

Quarter 1 2017



Data: BLS
Analysis: Workforce Intelligence Network



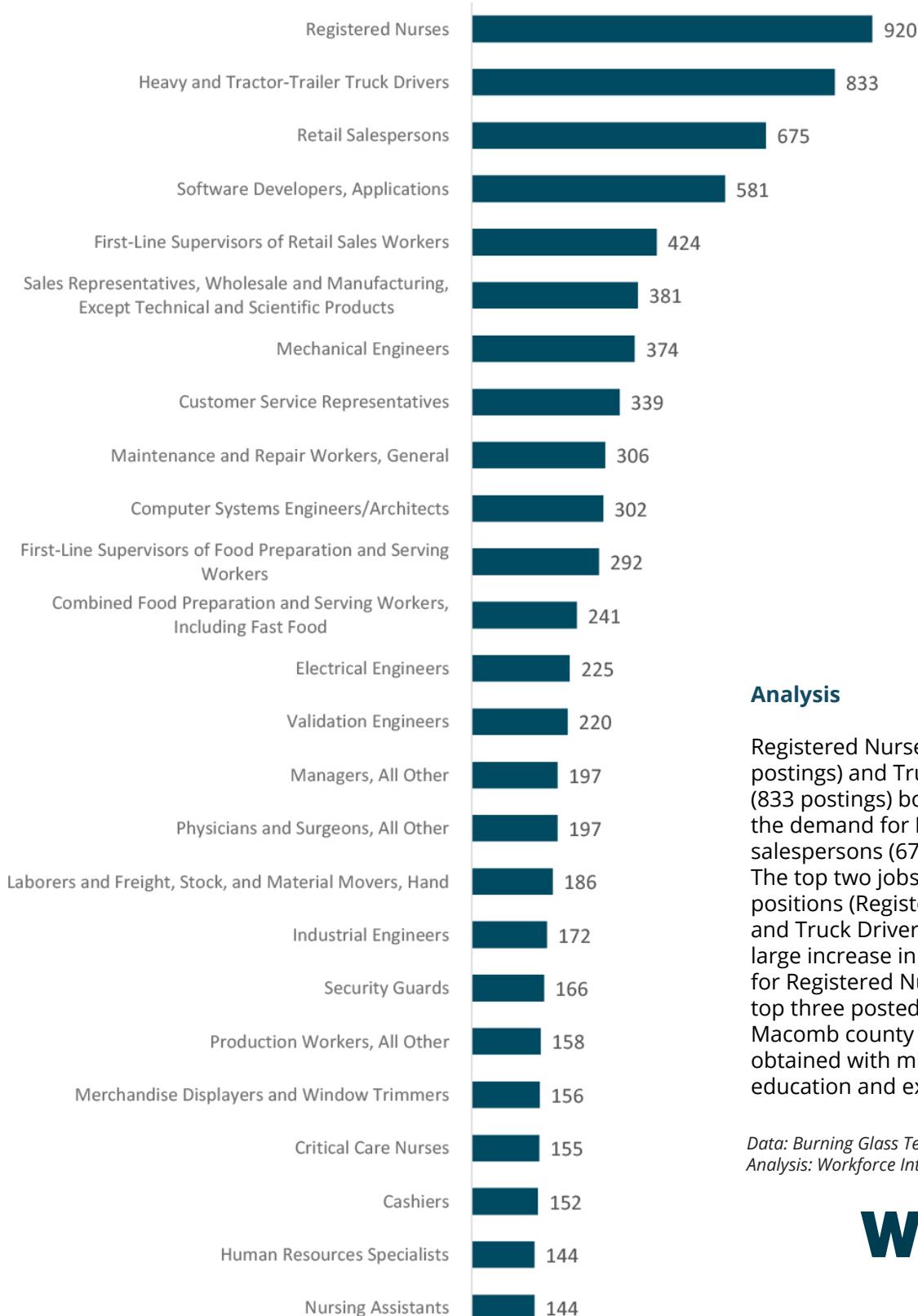
18,850 total job postings

27.8%

increase in online postings
compared to Q1 2016

Top Jobs

Quarter 1 2017



Analysis

Registered Nurses (920 postings) and Truck Drivers (833 postings) both exceed the demand for Retail salespersons (675 postings). The top two jobs switched positions (Registered Nurses and Truck Drivers) due to an large increase in the demand for Registered Nurses. The top three posted positions in Macomb county can be obtained with minimal education and experience.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Registered Nurses:
most in-demand occupation



Unemployment decreased
to 5.2% in Macomb County

Top Jobs
Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



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.

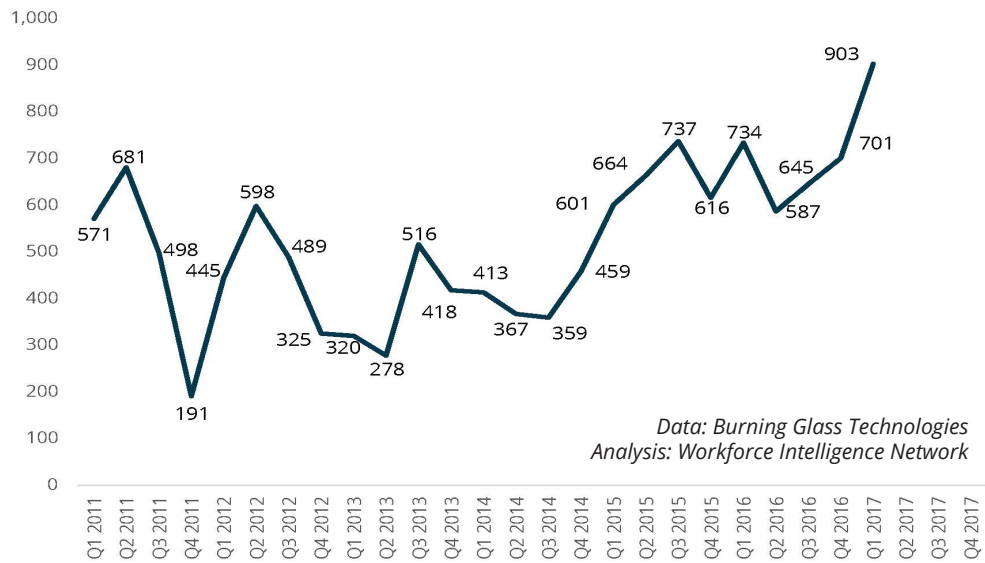
Job Posting Analysis

Online job postings for business and finance occupations continued to increase in Q1 2017, setting a new high for number of job posting. In Q1 2017, 903 online ads for this occupation group represented a 28 percent increase over Q4 2016.

Employment Analysis

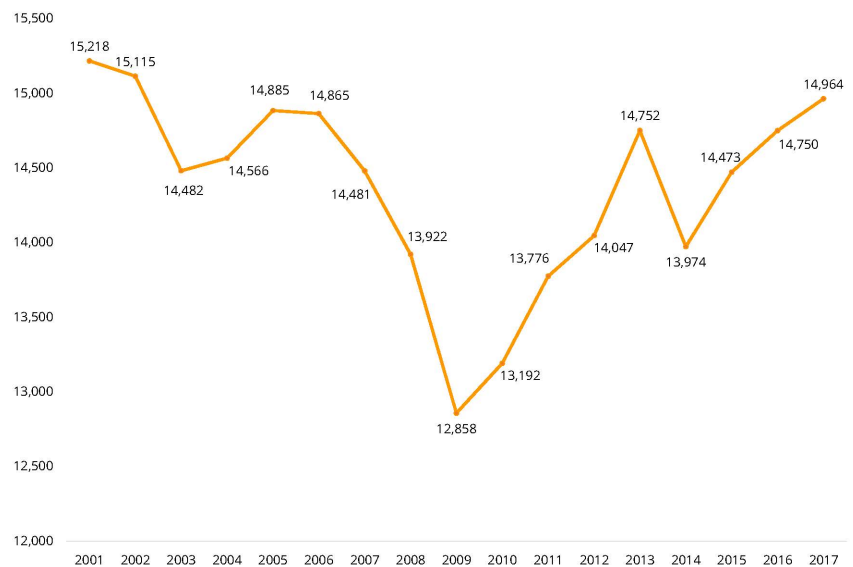
This occupation group is close to achieving 2001 levels of employment. The increasing demand for these workers should lead to steady employment growth in years to come—employment has grown in six of the past seven years.

Online Job Postings



Employment Over Time

Quarter 1 2017





High demand for
Human Resource Specialists

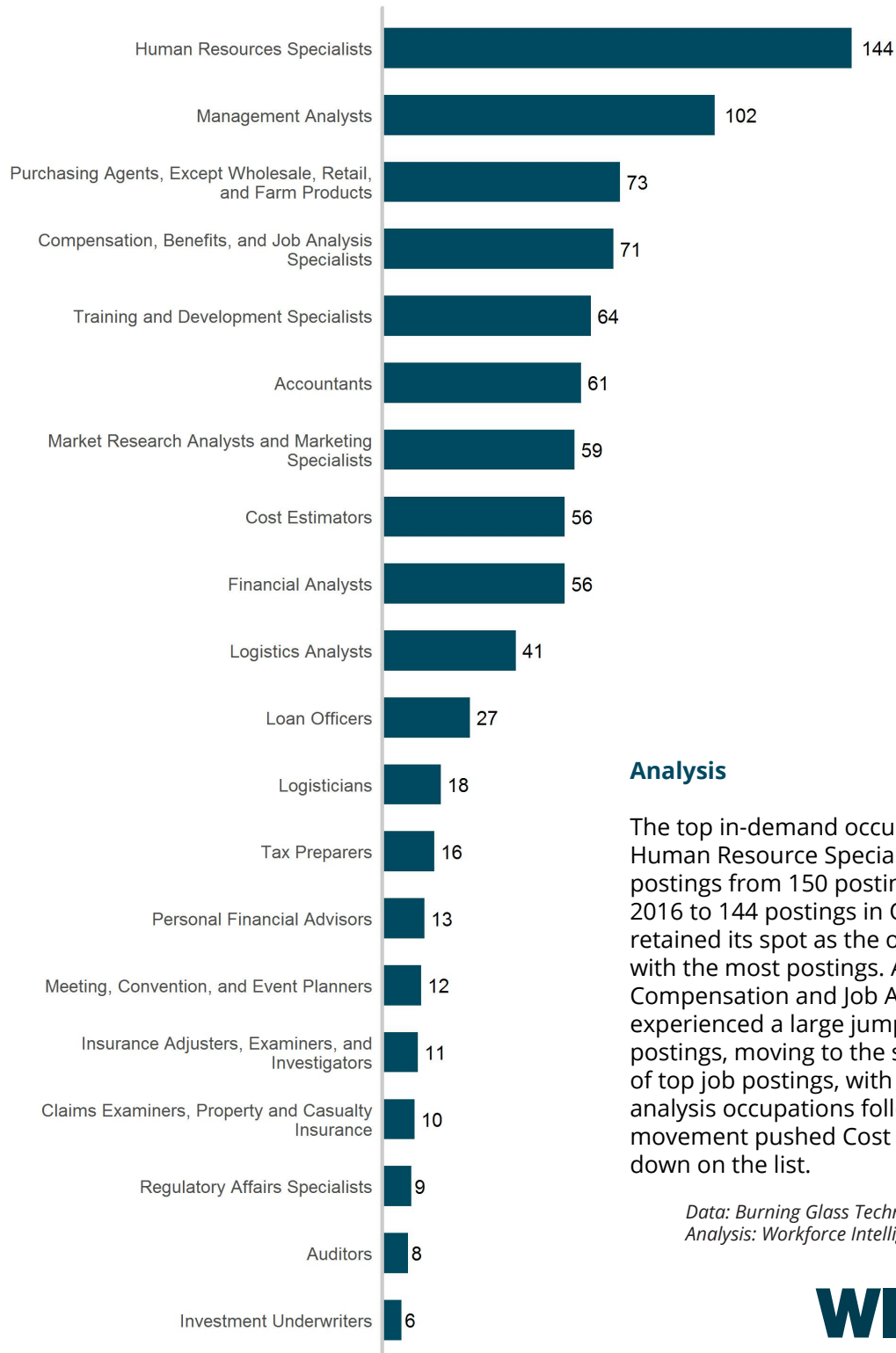


Most in-demand experience:
0-5 years

Business & Finance

Top Jobs

Quarter 1 2017



Analysis

The top in-demand occupation of Human Resource Specialist fell in postings from 150 postings in Q4 2016 to 144 postings in Q1 2017 but retained its spot as the occupation with the most postings. Additionally, Compensation and Job Analyst have experienced a large jump in postings, moving to the second spot of top job postings, with other analysis occupations following. This movement pushed Cost Estimators down on the list.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



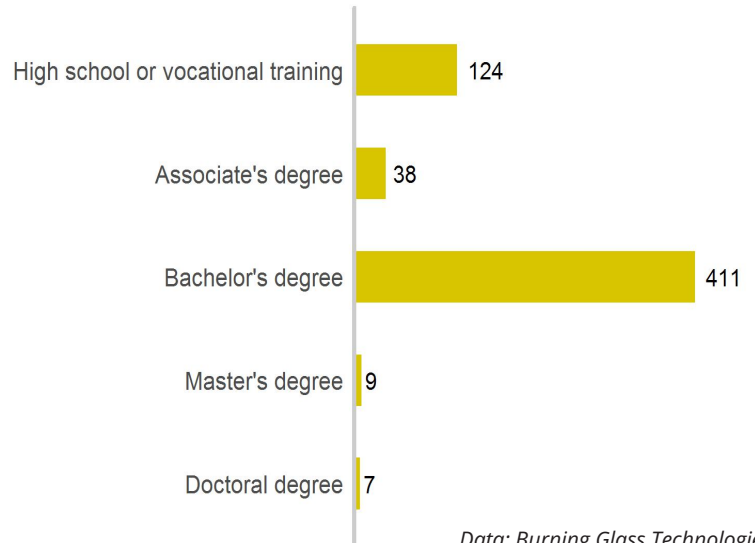
Most desired education:
bachelor's degree

28%
increase in demand
compared to Q4 2016

Business & Finance Educational Attainment Required

Of the 903 business and finance group job postings, 489 expressed a desired experience level during the Q1 2017 posting period. 425 postings were available to workers with less than five years of experience, 209 (or 43 percent) of which were entry-level positions calling for zero to two years of work experience. Most of the business and finance jobs posted in Macomb County (46 percent or 411 postings) expressed interest in candidates with a bachelor's degree as either a preferred or required qualification.

Educational Attainment

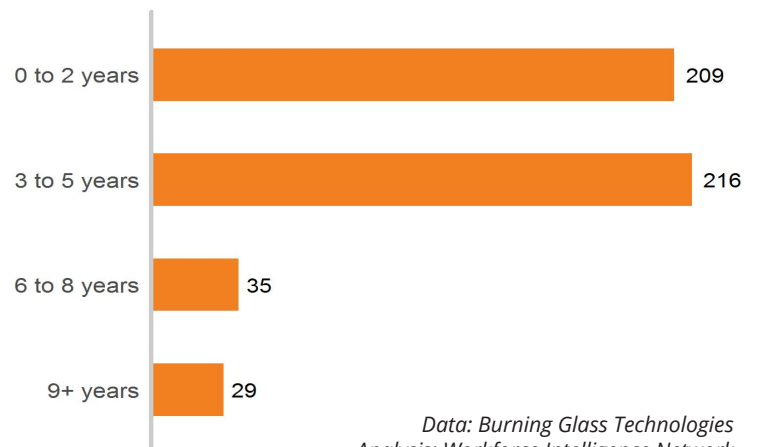


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

In-Demand Area of Study

- Business Administration and Management, general
- Accounting
- Finance, general
- Engineering, general
- Computer Science

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Skills in-demand:
management and communication



Key areas of study:
management and accounting

Business & Finance In-Demand Skills

The most often advertised baseline and specialized skills for business and finance occupations demonstrate that Macomb County employers seek workers with well-rounded foundational skills along with expertise in a specific, specialized areas. In addition to having expertise in accounting or financial analysis, Business and finance professionals need to also have strong communication, writing, and problem-solving skills.

Technical In-Demand Skills

- Project Management/ Scheduling
- Budgeting/ Accounting
- Purchasing
- Recruiting
- Financial Analysis

Foundational In-Demand Skills

- Communication
- Microsoft Office
- Writing
- Organizational
- Problem Solving

Job Type

- Temporary: 2.4%
- Full-time: 57.0%
- Part-time: 5.3%

Certifications Required

- Certified Public Accountant (CPA)
- Security Clearance
- Series 6 and 7
- Mortgage License
- Certified Fraud Examiner



Certified Public Accountants (CPAs) in-demand



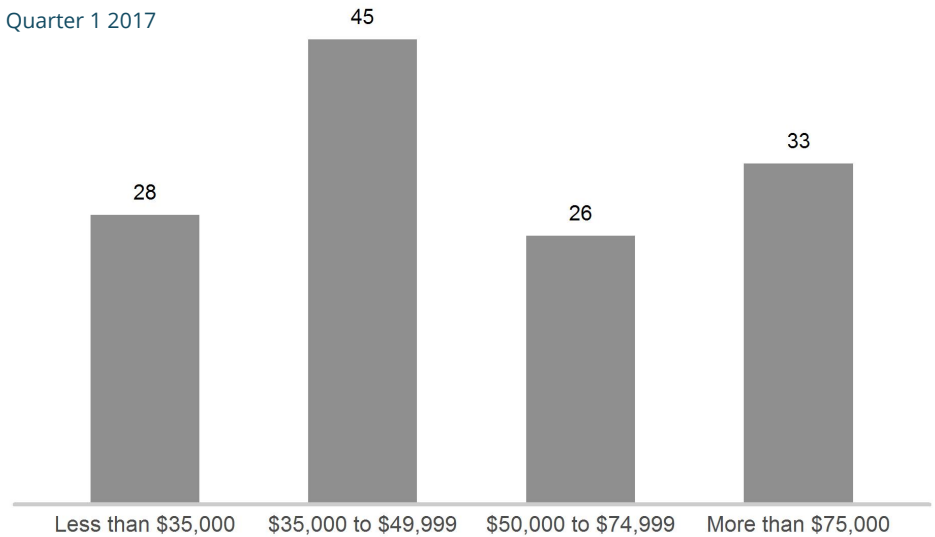
Most Business and Finance postings offer full-time work

Business & Finance Wages

A majority of advertised salaries were above \$50,000 per year. The average advertised salary for this occupation group in Macomb during Q1 2017 was \$56,477 per year. This is 66 percent more than the state's median earnings for all workers which is \$34,000 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
13-1071	Human Resources Specialists	\$15.25	\$18.94	\$24.37	\$30.92	\$38.46
13-1111	Management Analysts	\$17.46	\$25.77	\$36.87	\$48.74	\$64.44
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	\$17.34	\$22.54	\$29.09	\$35.96	\$44.17
13-1141	Compensation, Benefits, and Job Analysis Specialists	\$18.26	\$22.46	\$26.92	\$35.08	\$41.25
13-1151	Training and Development Specialists	\$13.84	\$17.77	\$23.73	\$32.56	\$40.86
13-2011	Accountants	\$17.70	\$21.40	\$28.45	\$36.97	\$49.11
13-1161	Market Research Analysts and Marketing Specialists	\$14.04	\$17.99	\$23.01	\$32.36	\$41.50
13-1051	Cost Estimators	\$15.81	\$20.04	\$26.19	\$34.96	\$41.25
13-2051	Financial Analysts	\$20.55	\$24.43	\$30.84	\$38.85	\$46.51
13-1081	Logistics Analysts	\$22.54	\$28.18	\$35.96	\$42.80	\$49.90

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Engineers & Designers (Manufacturing Focused)

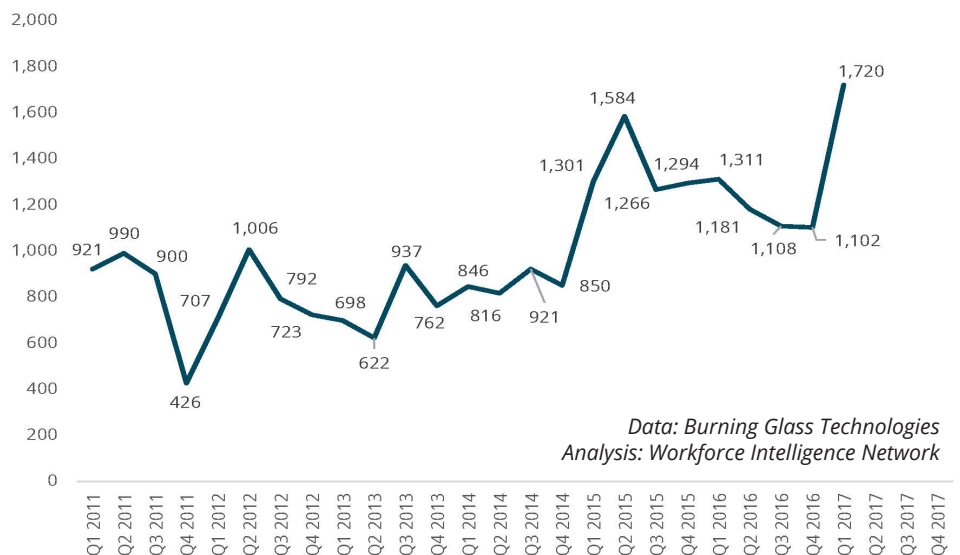
Introduction

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

Macomb County experienced an increase in job postings moving into Q1 2017 within the engineering and design occupation group. Postings rose to 1,720 online job ads from 1,102 in Q4 2016 increasing 54 percent.

Online Job Postings

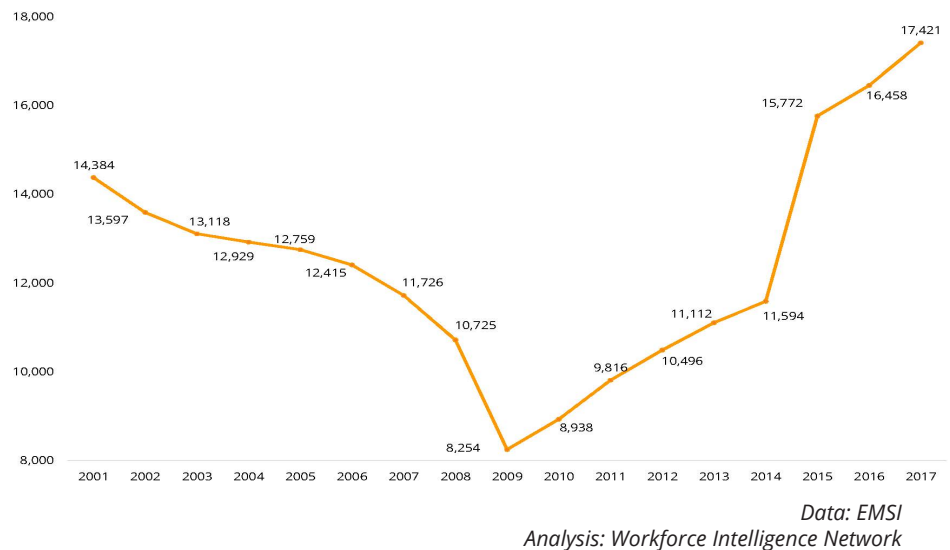


Employment Analysis

Employment of engineers and designers continued to rise following the substantial jump between 2014 and 2015. This occupation group now employs over 18,000 individuals in Macomb County, a level that surpasses early 2000 highs. The high demand for these occupations in the region should lead to steady employment growth in years to come.

Employment Over Time

Quarter 1 2017





Majority of advertised salaries
< \$75,000 per year

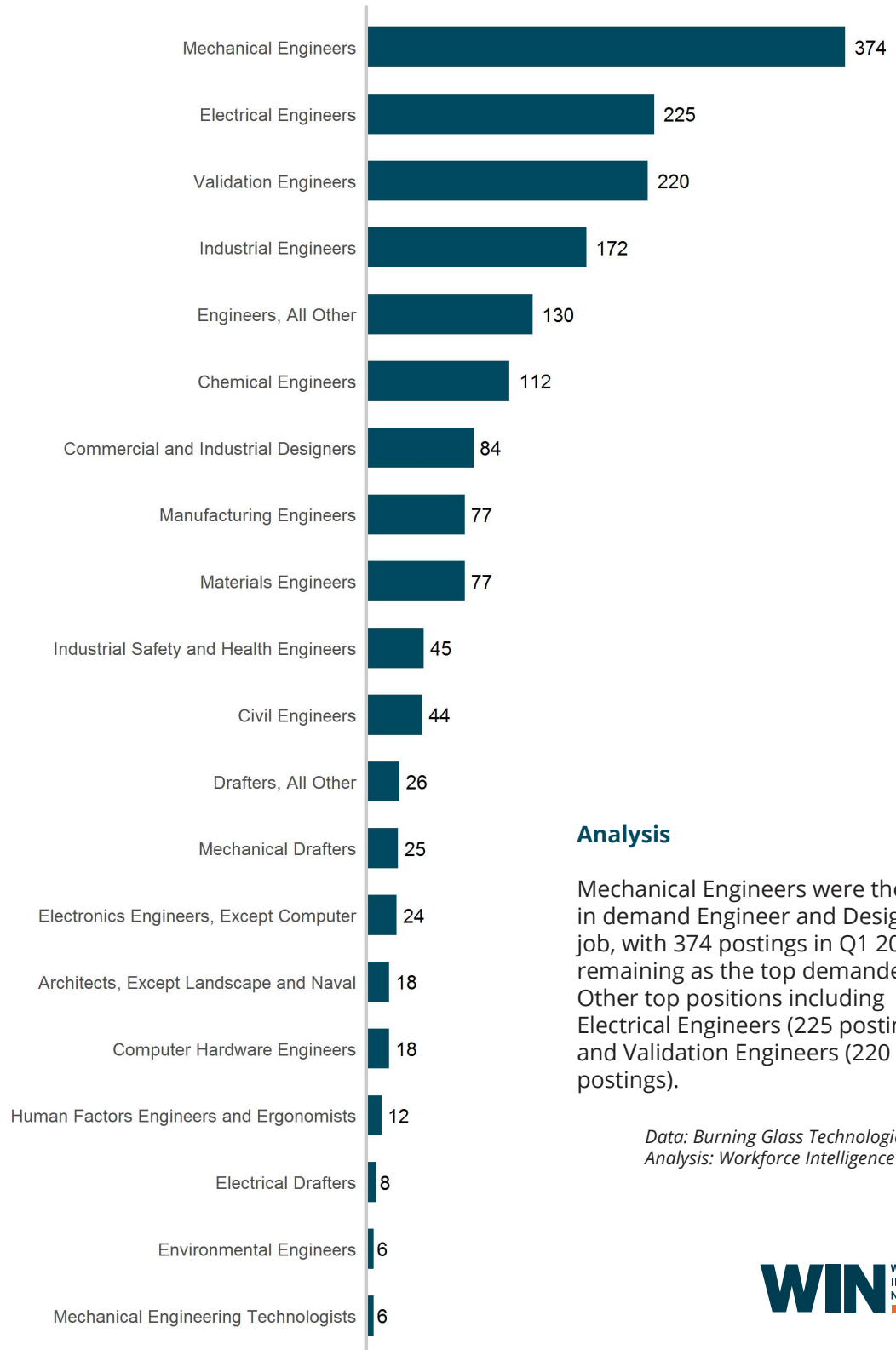


3-5 years of experience
in-demand

Engineers & Designers

Top Jobs

Quarter 1 2017



Analysis

Mechanical Engineers were the most in demand Engineer and Designer job, with 374 postings in Q1 2017, remaining as the top demanded job. Other top positions including Electrical Engineers (225 postings) and Validation Engineers (220 postings).

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Preferred Education: Bachelor's Degree

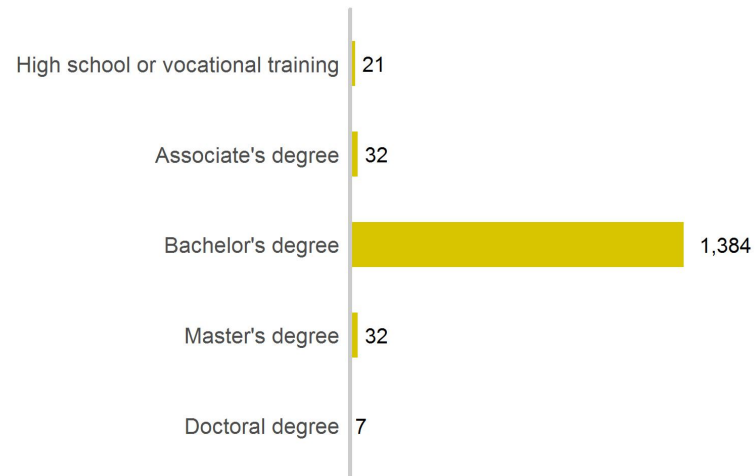
54%
Increase in Demand
from Q4 2016

Engineers & Designers Educational Attainment Required

Nearly all (94 percent) of postings providing minimum education requirements required that applicants have a bachelor's degree.

Most employers in Macomb County seeking engineers and designers prefer applicants with some previous experience, mostly in the three to five year range. The roughly 400 postings preferring candidates with six or more years of experience are most likely management positions. Opportunities for recently graduated engineers do exist in Macomb County – almost 200 online ads required two years or less experience.

Educational Attainment

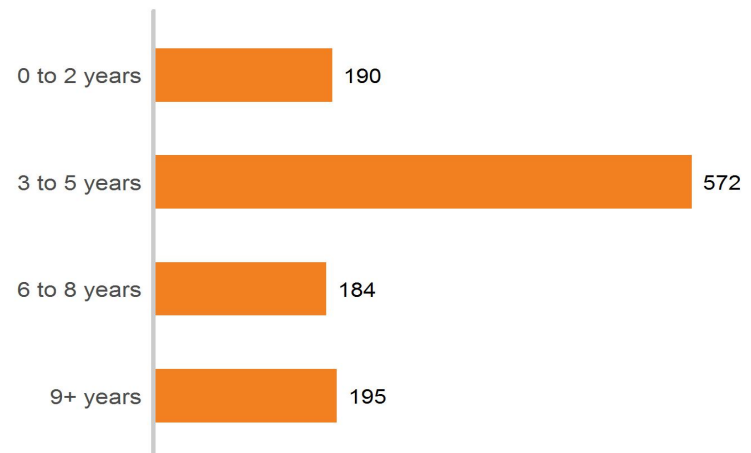


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

In-Demand Area of Study

- Engineering, general
- Electrical and Electronic Engineering Technologies/Technicians, other
- Mechanical Engineering
- Computer Science
- Business Administration and Management

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Skills desired: validation and manufacturing process



Engineering: Area of Study in-demand

Engineers & Designers In-Demand Skills

The most often advertised baseline and specialized skills for engineers and designers demonstrate that Macomb County employers seek workers with well-rounded foundational skills along with expertise in a specific specialized skill area. In addition to having expertise in whatever their degree may have been in, engineers and designers need to also have strong communication, problem solving, and writing skills.

Technical In-Demand Skills

- Validation
- Mechanical Engineering
- Microsoft Office
- Manufacturing Process
- Electrical Engineering

Foundational In-Demand Skills

- Communication
- Microsoft Office
- Writing
- Problem Solving
- Multi-tasking

Job Type

- Temporary: 1%
- Full-time: 59.5%
- Part-time: 19%

Certifications Required

- Six Sigma Black Belt
- Six Sigma Certification
- Security Clearance
- Six Sigma Green Belt
- American Board for Engineering and Technology Accredited



Most openings are full-time



Desired Certification:
Six Sigma Black Belt

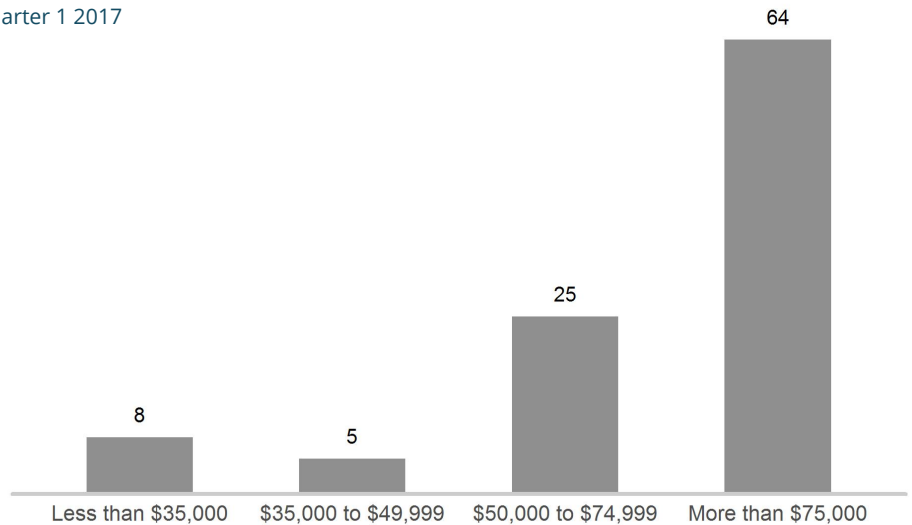
Engineers & Designers Wages

The majority of advertised salaries in the engineering and design group in Q1 2017 were greater than \$50,00 per year. The average advertised salary for this occupation group in Macomb during Q1 2017 was \$77,984 per year. This is 129 percent more than the state's median earnings for all workers which is \$34,000 per year.

Each of the top occupations in this group offer over \$30 per hour at the median level while half offer more than \$40 per hour.

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	\$26.74	\$33.02	\$39.87	\$48.03	\$53.73
17-2071	Electrical Engineers	\$25.20	\$30.35	\$37.41	\$43.65	\$52.15
17-2199	Validation Engineers	\$18.15	\$31.98	\$41.13	\$50.94	\$62.56
17-2112	Industrial Engineers	\$24.22	\$30.06	\$36.82	\$43.00	\$50.85
17-2199	Engineers, All Other	\$18.15	\$31.98	\$41.13	\$50.94	\$62.56
17-2041	Chemical Engineers	No Data Available	No Data Available	No Data Available	No Data Available	No Data Available
27-1021	Commercial and Industrial Designers	\$23.53	\$29.03	\$34.92	\$39.42	\$42.52
17-2199	Manufacturing Engineers	\$18.15	\$31.98	\$41.13	\$50.94	\$62.56
17-2131	Materials Engineers	\$23.44	\$28.85	\$35.99	\$45.16	\$55.14
17-2111	Industrial Safety and Health Engineers	No Data Available	No Data Available	No Data Available	No Data Available	No Data Available

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, more health care workers needed to care for Michigan's aging population and in response to regulatory and other changes. Registered nurses are routinely the most in-demand job in this group.

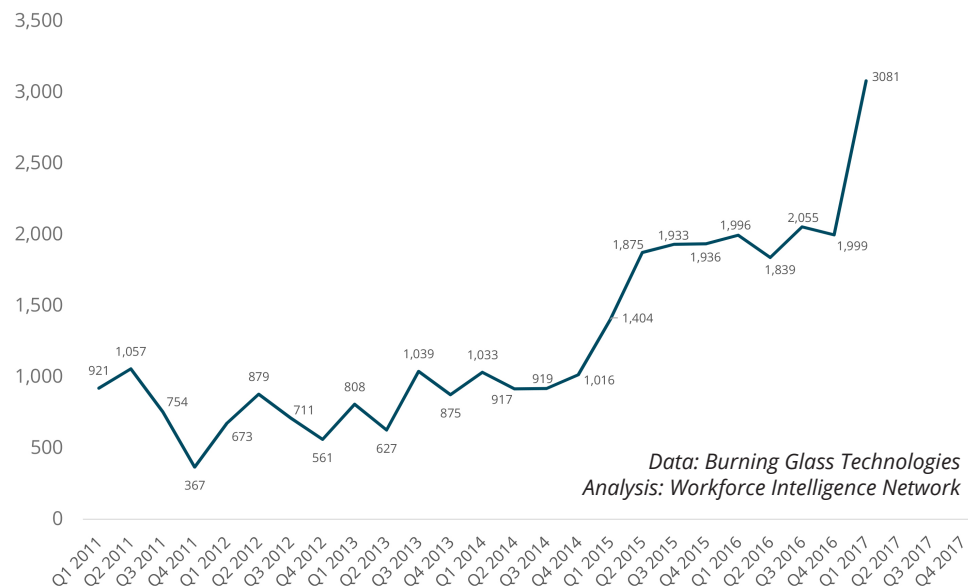
Job Posting Analysis

Q1 2017 marks a new high for Macomb County for health care occupations. The 54 percent of posting increase (3081 postings in Q1 2017) comes after seven consecutive quarters of job postings in the range of 1,800 to 2,100.

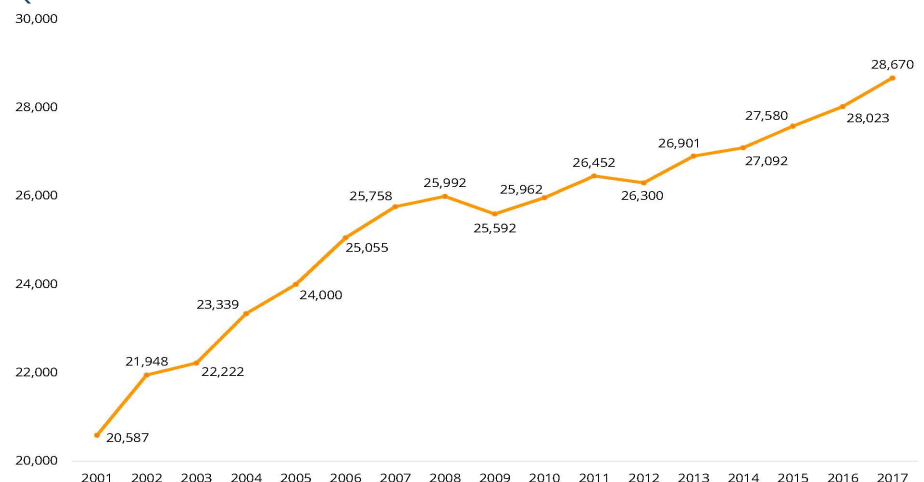
Employment Analysis

The increase in employer demand evident in health care postings during the first quarter of 2017 has resulted in an employment jump of 600 individuals (+ 2.3 percent). Unlike other occupation groups, health care employment was not severely affected during the Great Recession. Employment in this group has increased in all but two years since 2001.

Online Job Postings



Employment Over Time Quarter 1 2017



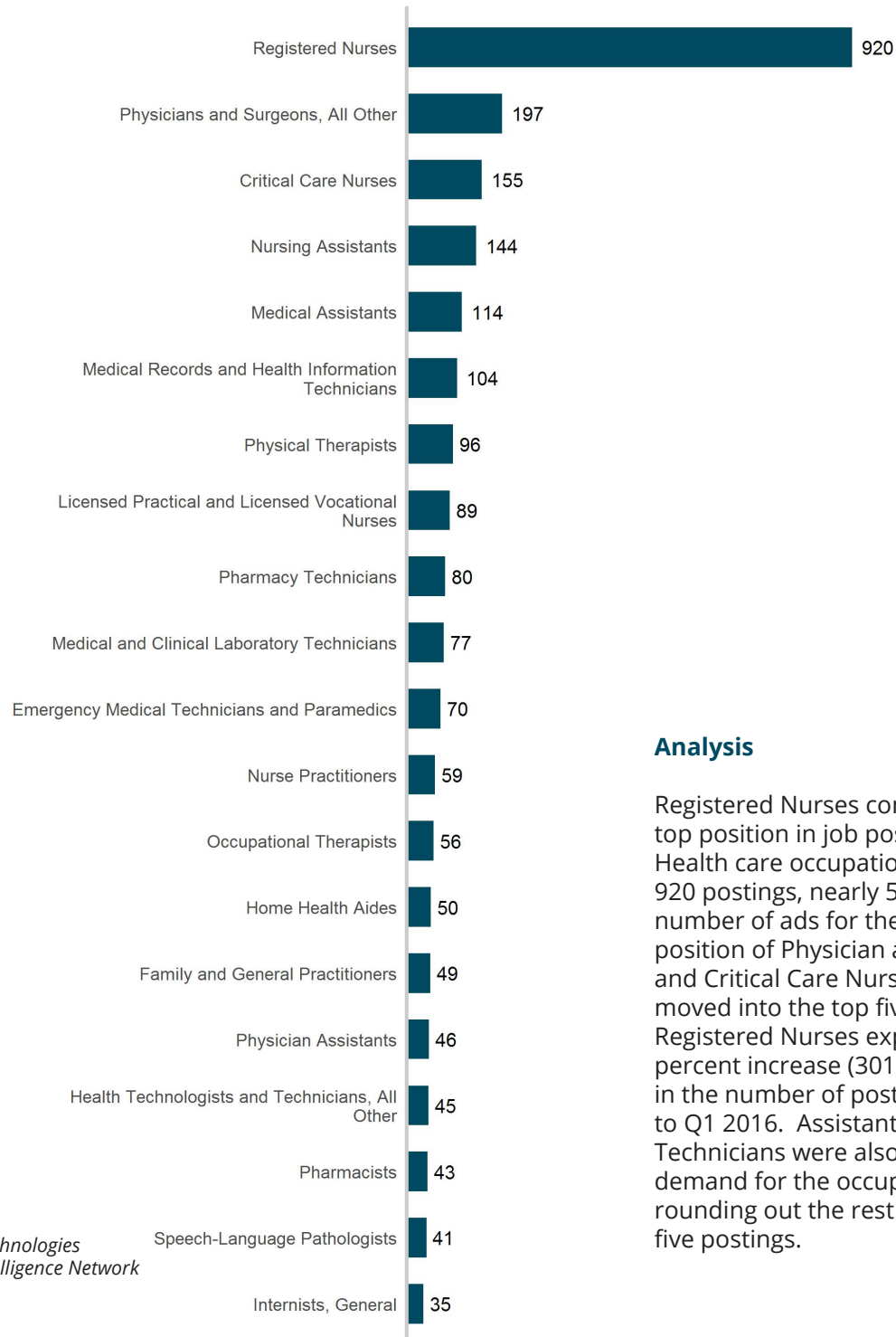


Ares of Study:
Nursing and Physical Therapy



Skills desired: Patient Care/
Treatment Planning

Health Care Top Jobs Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Analysis

Registered Nurses continue hold the top position in job postings for the Health care occupation group with 920 postings, nearly 5 five times the number of ads for the subsequent position of Physician and Surgeons and Critical Care Nurses, which moved into the top five this period. Registered Nurses experienced a 43 percent increase (301 job postings) in the number of postings compared to Q1 2016. Assistants and Technicians were also high in-demand for the occupation group rounding out the rest of the top 5 five postings.



Many opportunities for entry level health care workers

54%

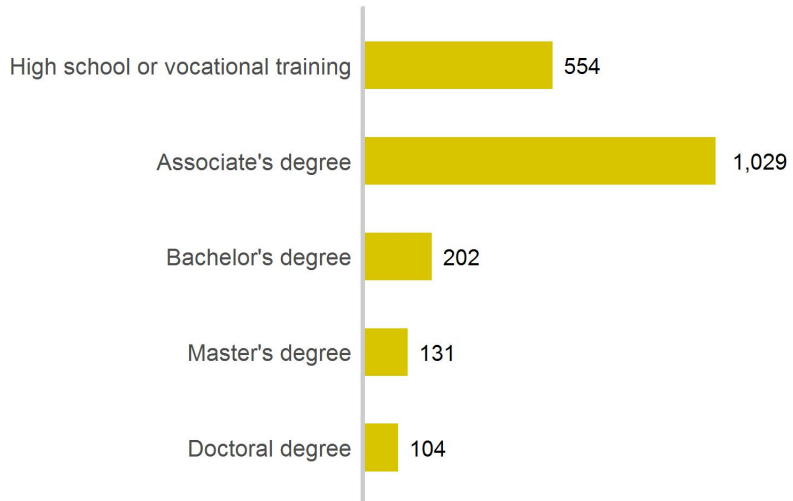
Increase in employer demand since Q4 2016

Health Care Educational Attainment Required

Occupations in the health care group offer opportunities to individuals at all education levels. The advertised level of education desired were individuals with either vocational training or an associate's degree. A bachelor's degree was modestly demanded with 202 postings (6.5 percent of postings). Job postings desiring a graduate or professional degrees (7.6 percent) were most likely for occupations like Physicians and Pharmacists which require years of education and training beyond a bachelor's.

Also, dissimilar to other occupation groups was the distribution of experience requirements for health care workers. An overwhelming majority of employers in Macomb County asked for little to no experience from prospective candidates. This indicates that with enough training or education individuals can immediately begin working in one of many in-demand health care fields.

Educational Attainment

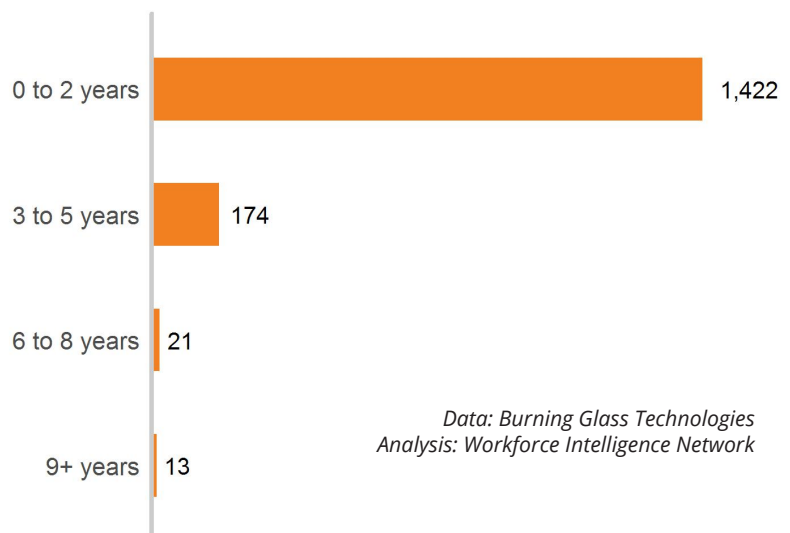


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

In-Demand Area of Study

- Nursing Science
- Physical Therapy/Therapist
- Engineering, general
- Radiologic Technology/Science
- Biology/Biological Sciences, general

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Associate Degree
in-demand education

43%

increase in Registered
Nurse postings in Q1 2017

Health Care In-Demand Skills

The most often advertised baseline and specialized skills for health care occupations demonstrate that Macomb County employers seek workers with well-rounded foundational skills along with expertise of a specific health care skill, most often related to patients. In addition to having an excellent grasp on patient care, health care workers must also be able to communicate effectively, provide customer service, and supervise others.

Technical In-Demand Skills

- Patient Care/Treatment Planning
- Teaching/ Customer Service
- Surgery
- Rehabilitation
- Cardiopulmonary Resuscitation (CPR)

Foundational In-Demand Skills

- Communication
- Ability to Perform Physical Tasks
- Quality Assurance and Control
- Teamwork/collaboration
- Customer Service

Job Type

- Temporary: 17.8%
- Full-time: 55.1%
- Part-time: 6.0%

Certifications Required

- Registered Nurse
- American Heart Association Certificate
- Basic Cardiac Life Support Certification
- Critical Care Registered Nurse (CCRN)
- First Aid CPR AED



In-demand areas of study: Nursing and Therapy



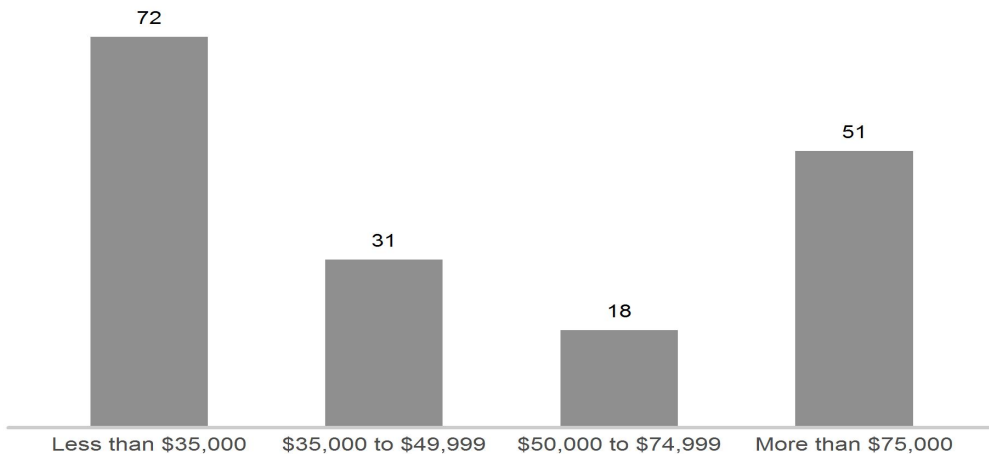
In-demand certification: Registered Nurse Certification

Health Care Wages

For job postings in the health care occupations group in Q1 2017, salary of individuals was almost evenly concentrated between less than \$35,000 per year or greater than \$50,000 per year. The average advertised salary for this occupation group in Macomb during Q1 2017 was \$54,822 per year. This is 61 percent more than the state's median earnings for all workers which is \$34,000 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
29-1141	Registered Nurses	\$23.56	\$27.60	\$31.48	\$36.03	\$51.50
29-1069	Physicians and Surgeons, All Other	\$24.52	\$67.90	\$82.31	\$99.01	\$155.67
29-1141	Critical Care Nurses	\$23.56	\$27.60	\$31.48	\$36.03	\$51.50
31-1014	Nursing Assistants	\$9.27	\$10.77	\$12.69	\$14.77	\$16.52
31-9092	Medical Assistants	\$9.57	\$11.02	\$12.50	\$14.60	\$16.28
29-2071	Medical Records and Health Information Technicians	\$9.64	\$11.67	\$15.07	\$18.64	\$21.33
29-1123	Physical Therapists	\$25.98	\$32.15	\$39.11	\$49.80	\$71.61
29-2061	Licensed Practical and Licensed Vocational Nurses	\$15.40	\$18.13	\$21.23	\$24.44	\$26.49
29-2052	Pharmacy Technicians	\$9.00	\$10.68	\$13.23	\$15.92	\$17.87
29-2012	Medical and Clinical Laboratory Technicians	\$10.61	\$12.13	\$14.64	\$18.86	\$24.61

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Information Technology

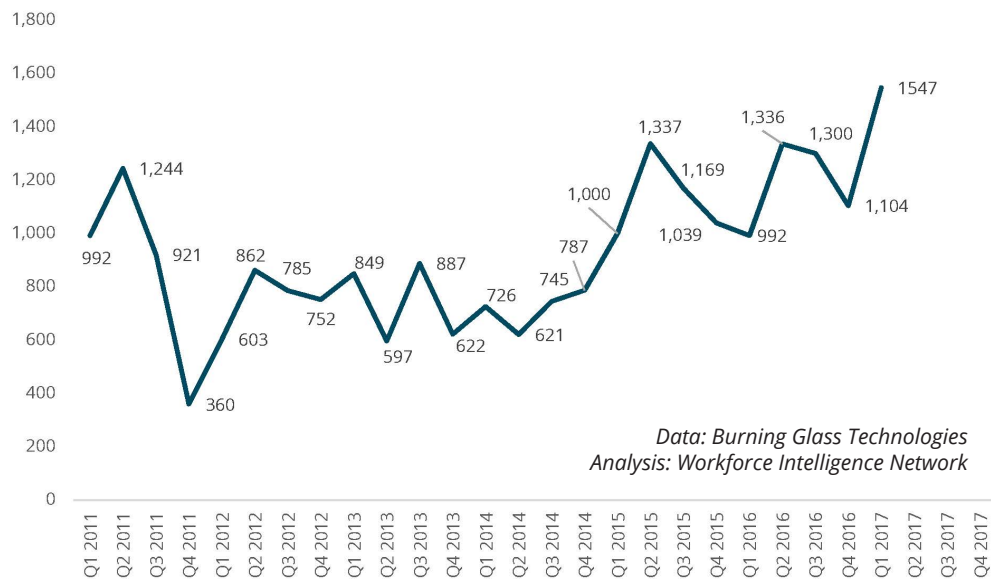
Introduction

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

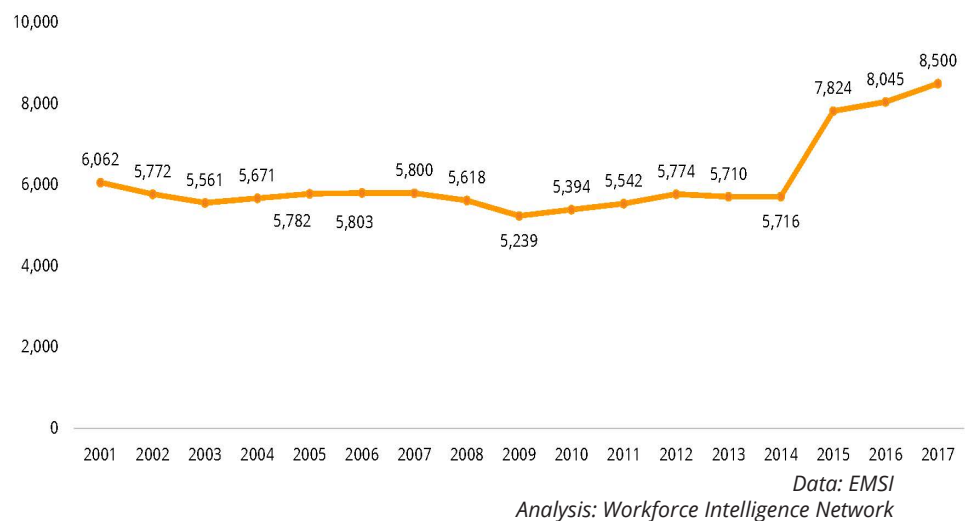
Online job postings for occupations related to IT were up 40 percent to 1,547 postings during Q1 2017, compared to 1,104 postings in Q4 2016. This is 210 posting greater than the 5-year high in 2015 of 1,337 postings.

Online Job Postings



Employment Over Time

Quarter 1 2017



Employment Analysis

Employment for IT occupations in Macomb County continued its impressive growth into 2017 following over a decade of relatively flat change. A record level of employment in the region, 8,500 workers, was achieved in 2017. With high demand, the IT occupation group should continue to expand in Macomb County.



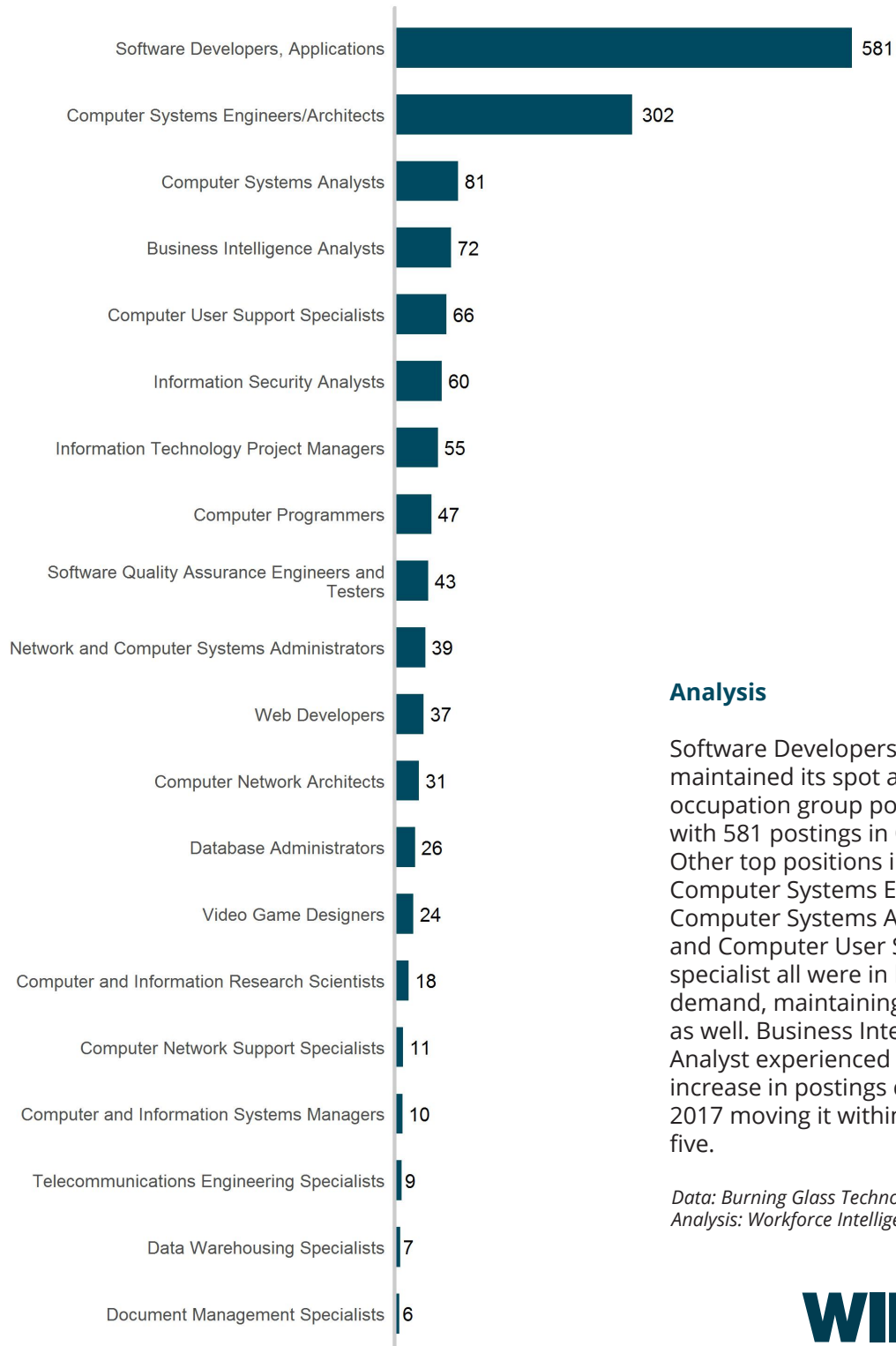
Top in-demand occupation:
Software Developers, Applications



Bachelor's degree
in-demand education

Information Technology Top Jobs

Quarter 1 2017



Analysis

Software Developers maintained its spot as top IT occupation group postings, with 581 postings in Q1 2017. Other top positions including Computer Systems Engineers, Computer Systems Analyst, and Computer User Support specialist all were in high demand, maintaining top spots as well. Business Intelligence Analyst experienced an increase in postings during Q1 2017 moving it within the top five.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Postings desired 3-5 years of prior experience

40%

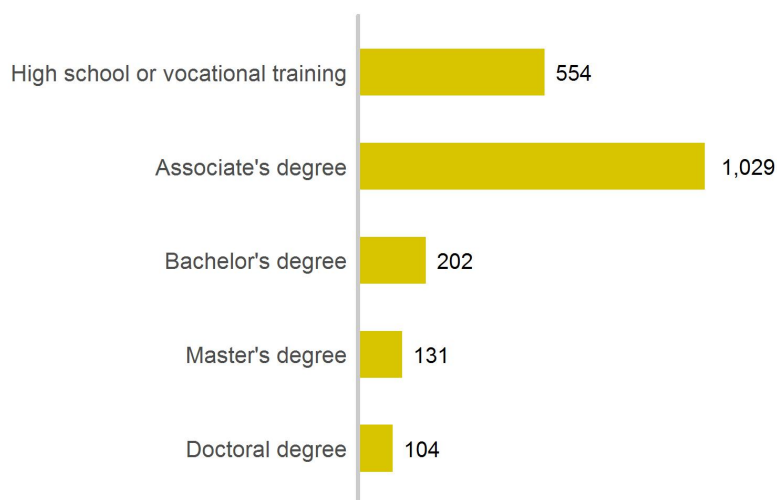
increase in employer demand from Q4 2016

Information Technology Educational Attainment Required

Nearly all (71 percent) of postings providing minimum education requirements asked that applicants have a bachelor's degree. While most IT occupations require a bachelor's or more advanced degrees, opportunities do exist for candidates – particularly those with associate's degrees in areas like web development.

In postings that advertised a preferred level of experience, employers most often sought candidates with three to five years of experience. Opportunities do exist for IT workers with less experience, with 209 online ads asking for zero to two years of experience.

Educational Attainment

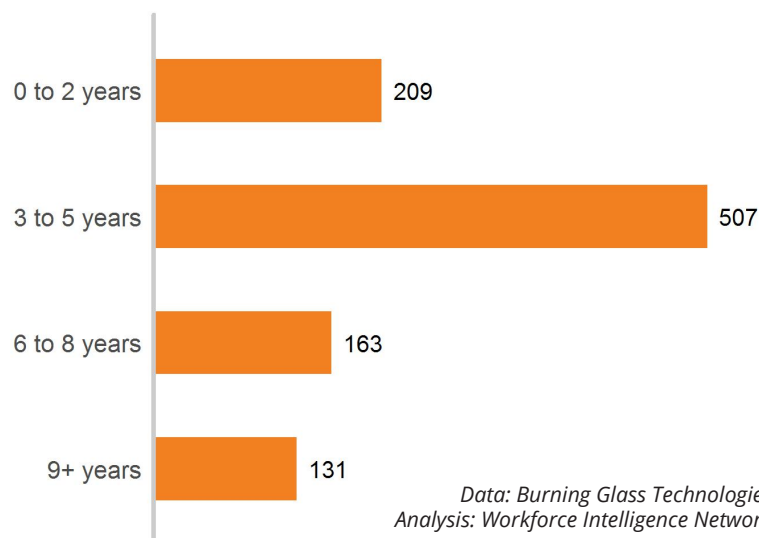


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

In-Demand Area of Study

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

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Advertised average salary:
\$65,312 per year



In-Demand Certification:
Security Clearance

Information Technology in-Demand Skills

The most often advertised baseline and specialized skills for IT occupations demonstrate that Macomb County employers seek workers with well-rounded foundational skills along with expertise of a specific IT skill, most often a computer language. In addition to knowing languages like SQL or JAVA, IT workers must also possess foundational skills such as communication, writing, and problem solving.

Technical In-Demand Skills

- Software Development/Engineering
- Electrical Engineering
- Validation
- Project Management
- Computer/ Systems Engineering

Foundational In-Demand Skills

- Communication
- Writing
- Problem Solving
- Microsoft Office
- Project Management

Job Type

- Temporary: Data Not Available
- Full-time: 49.7%
- Part-time: 0.8%

Certifications Required

- Security Clearance
- Six Sigma Green Belt
- Security+
- Six Sigma Black Belt
- Project Management Certification (e.g. PMP)



Area of Study: Engineering & Computer Science



Communication and Engineering Skills Desired

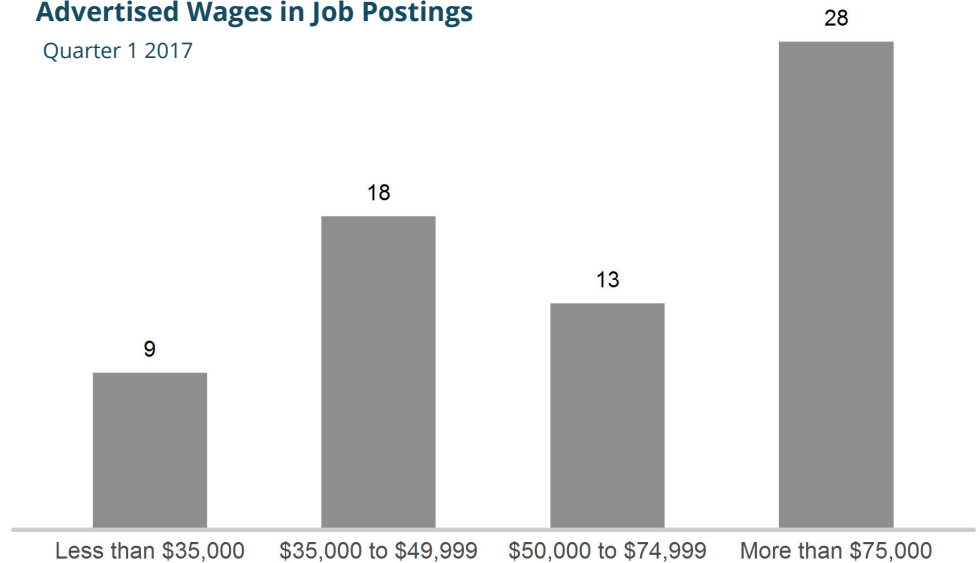
Information Technology Wages

Out of 1,547 only 68 job postings featured an advertised salary. The majority of advertised salaries (28 postings) were above \$75,000 per year.

The average advertised salary for this occupation group in Macomb during Q1 2016 was \$65,312 per year. This is 92 percent more than the state's median earnings for all workers which is \$34,000 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
15-1132	Software Developers, Applications	\$20.86	\$25.40	\$33.11	\$42.94	\$51.65
15-1199	Computer Systems Engineers/Architects	\$22.33	\$28.80	\$35.40	\$43.87	\$51.98
15-1121	Computer Systems Analysts	\$19.30	\$26.50	\$34.17	\$43.22	\$52.11
15-1199	Business Intelligence Analysts	\$22.33	\$28.80	\$35.40	\$43.87	\$51.98
15-1151	Computer User Support Specialists	\$11.58	\$15.25	\$20.11	\$27.40	\$34.93
15-1122	Information Security Analysts	\$22.31	\$25.50	\$36.20	\$44.17	\$50.99
15-1199	Information Technology Project Managers	\$22.33	\$28.80	\$35.40	\$43.87	\$51.98
15-1131	Computer Programmers	\$23.22	\$28.16	\$32.41	\$40.23	\$48.15
15-1199	Software Quality Assurance Engineers and Testers	\$22.33	\$28.80	\$35.40	\$43.87	\$51.98
15-1142	Network and Computer Systems Administrators	\$19.98	\$25.05	\$32.01	\$39.22	\$46.49

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Skilled Trades & Technicians (Manufacturing Focused)

Introduction

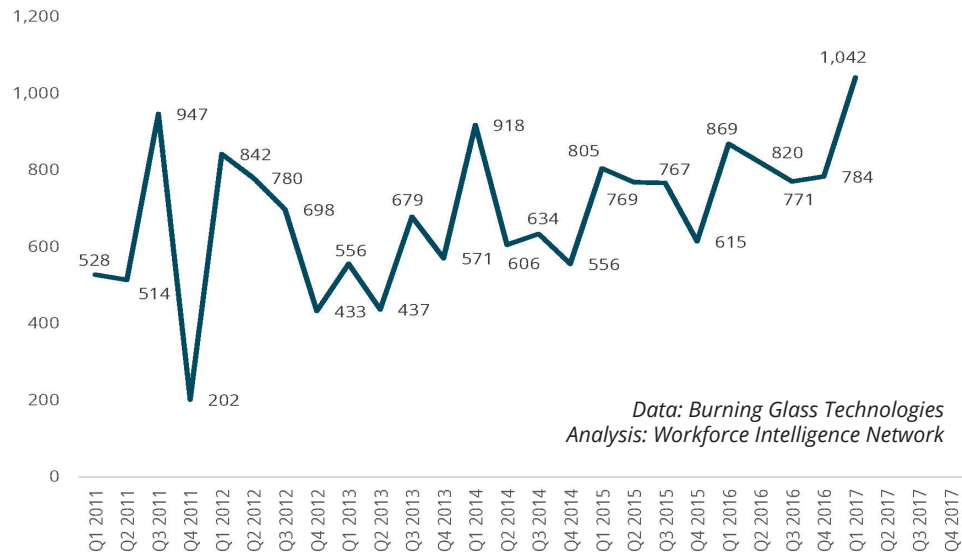
WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled- trades labor, such as CNC machinists and welders, than almost anywhere else in the country.

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

Online job postings for occupations related to skilled trades were up 32 percent to 1,042 during Q1 2017, compared to 784 during Q4 2016. This is 95 job postings more than the six-year high that occurred in Q4 2011 of 947 postings.

Online Job Postings

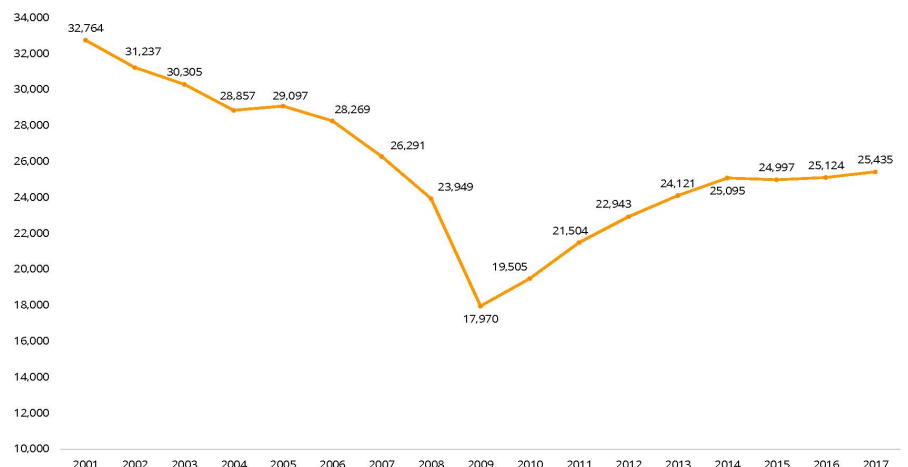


Employment Analysis

Employment for skilled trades and technicians increased for an eighth consecutive year as 2017 began. During Q1 2017, this occupation group employed 25,435 individuals in Macomb County, a 1.2 percent rise compared to 2015. Employment has surpassed 2008 levels, but remains well below early 2000 levels

Employment Over Time

Quarter 1 2017



Data: EMSI
Analysis: Workforce Intelligence Network



Workers with 0-5 years
experience in-demand

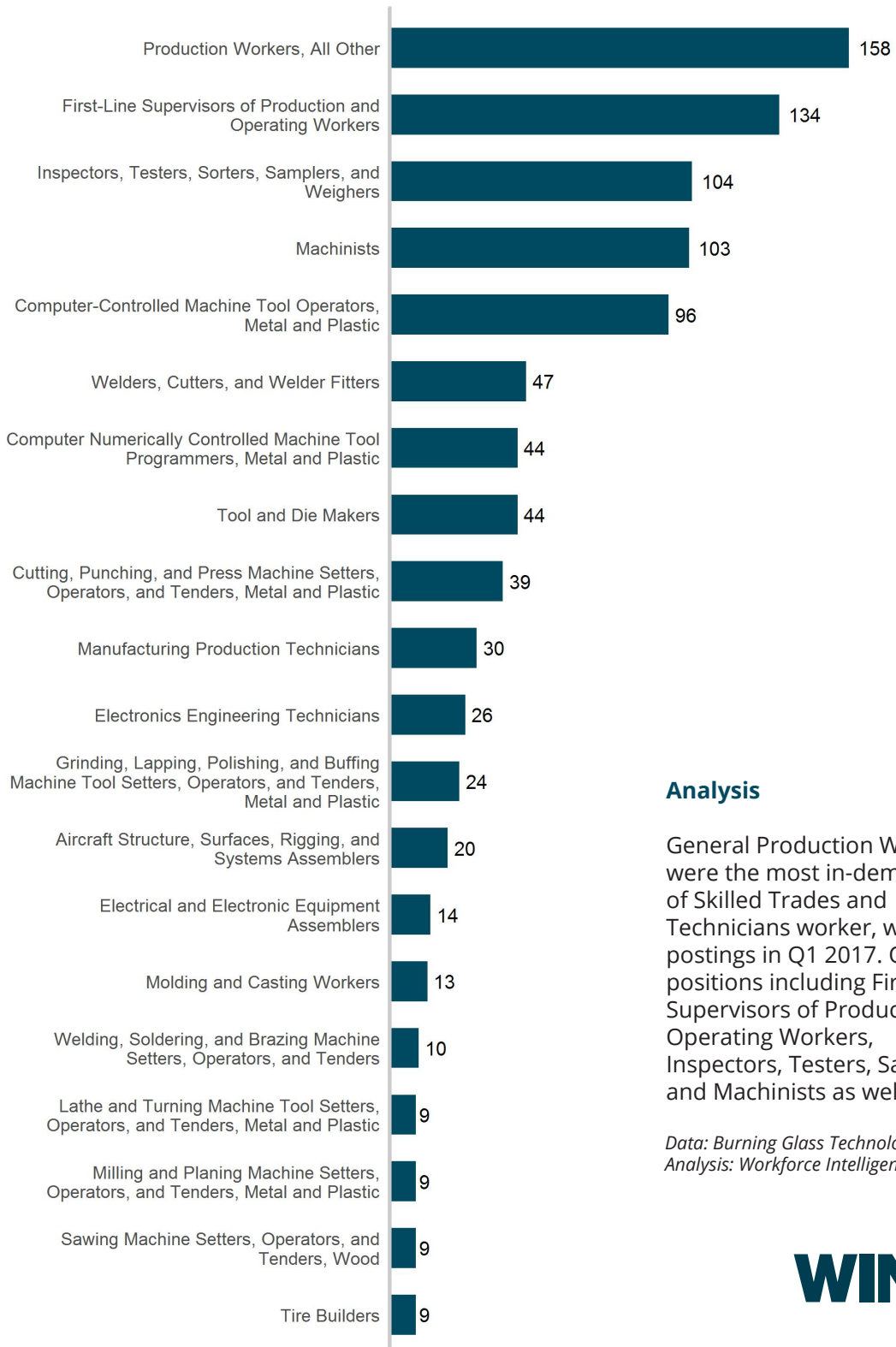


Production Workers remained
the top in-demand job

Skilled Trades & Technicians

Top Jobs

Quarter 1 2017



Analysis

General Production Workers were the most in-demand type of Skilled Trades and Technicians worker, with 158 postings in Q1 2017. Other top positions including First-Line Supervisors of Production and Operating Workers, Inspectors, Testers, Samplers, and Machinists as well.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Desired Education: High-School/ Vocational training

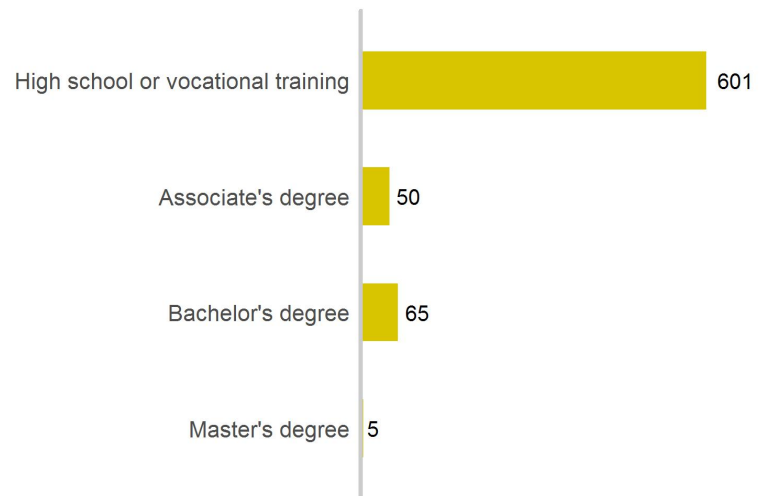
32%
increase in employer
demand from Q4 2016

Skilled Trades & Technicians Educational Attainment Required

Of online job postings that provided educational attainment requirements, an overwhelming proportion (80 percent) indicated a high school diploma or vocational training as sufficient for openings in the skilled trades. Most often, employers want skilled trades workers with either previous experience or training relevant to the position prior to hiring. Another 65 postings indicated a bachelor's degree as a requirement, most likely for supervisor/ management positions.

Meanwhile, nearly all the postings providing experience needs indicated that five or fewer years would suffice. The three to five years of experience category had the highest frequency of postings, indicating the availability of entry-level positions.

Educational Attainment

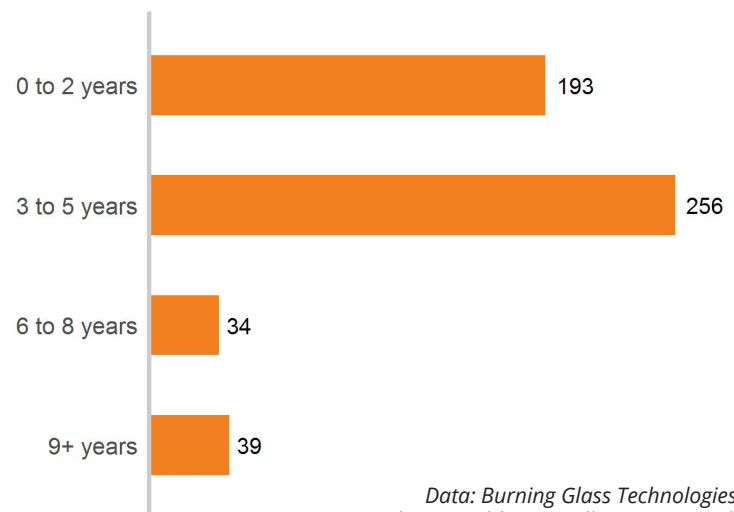


Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Degree and Certification Required

- Engineering, general
- Electrical and Electronic Engineering
- Business Administration and Management
- Chemistry
- Computer Science

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Skills desired: mechanical,
management, communication



Majority of Skilled Trades
postings offer full-time work

Skilled Trades & Technicians In-Demand Skills

The occupations in the skilled trades group require a wide array of high-level technical skills. Machinery, welding, repair, inspection, and other traditional skills remain the most common in skilled trades job postings. Management skills were also present in some of the skilled labor postings including supervisory skills, scheduling, operations management, human resource management, and leadership. Advanced technical skills such as mathematics do appear through the skills list most likely coinciding with the demand for procedural knowledge. Employers also look for communication, safety, and assessment skills when posting skilled trade jobs. These skills are imperative for Skilled Trades so that collaboration can be fostered in a safe and flowing environment.

Technical In-Demand Skills

- Computer Numerical Control (CNC)
- Machine Inspection and Repair
- Mathematics
- Microsoft Office
- Machining/ Welding

Foundational In-Demand Skills

- Communications
- Problem Solving/ Troubleshooting
- Ability to Perform Physical Tasks
- Planning/ Supervisory Skills
- Detailed-Oriented/Organizational Skills

Job Type

- Temporary: Data Not Available
- Full-time: 73.8%
- Part-time: 1.2%

Certifications Required

- Welding
- Security Clearance
- Forklift Operator Certification
- CDL Class A
- Programming Certification



In-demand areas of study: Engineering and Business



Most Skilled Trades employers are looking for full-time workers

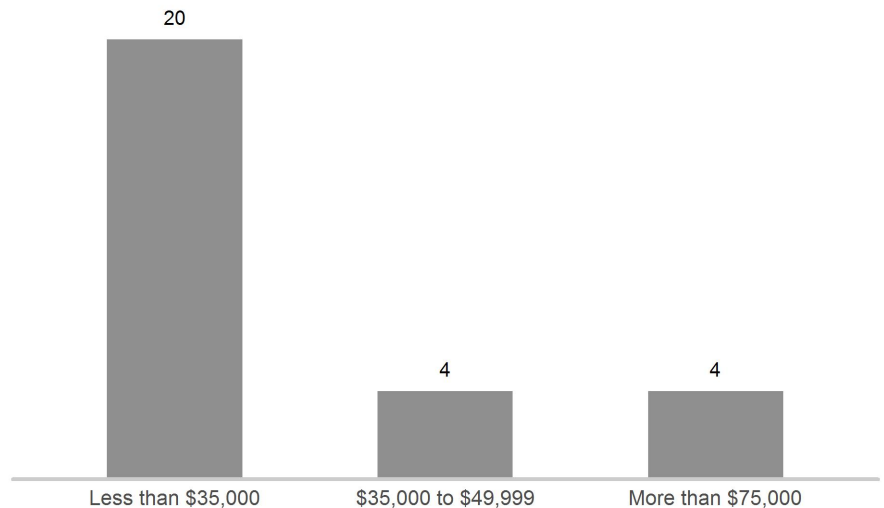
Skilled Trades & Technicians Wages

Out of 1,072 posting only 28 contained an advertised salary. The majority of advertised salaries in the skilled trades group in Q1 2017 were below \$35,000 a year.

The average advertised salary for this occupation group in Macomb during Q1 2017 was \$37,516. This is 10 percent more than the state's median earnings for all workers, \$34,000.

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
51-9199	Production Workers, All Other	\$10.77	\$13.64	\$16.54	\$18.93	\$24.89
51-1011	First-Line Supervisors of Production and Operating Workers	\$17.40	\$22.18	\$29.48	\$38.86	\$47.50
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.81	\$11.55	\$15.46	\$21.68	\$28.32
51-4041	Machinists	\$12.71	\$15.79	\$19.49	\$24.55	\$29.91
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$11.38	\$13.62	\$18.70	\$23.08	\$28.44
51-4121	Welders, Cutters, and Welder Fitters	\$12.73	\$15.15	\$17.87	\$22.25	\$28.27
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	\$16.84	\$20.04	\$24.64	\$29.31	\$33.34
51-4111	Tool and Die Makers	\$16.99	\$21.20	\$26.38	\$32.46	\$36.25
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$10.39	\$12.37	\$16.35	\$24.00	\$27.39
17-3029	Manufacturing Production Technicians	\$20.49	\$26.65	\$31.91	\$36.96	\$44.69

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	420,802	409,066	411,720	419,050	420,665	421,891	431,844	435,242	3,398	0.8%
Employment	362,380	363,484	371,286	379,414	387,356	397,529	408,907	412,398	3,491	0.9%
Unemployment	58,423	45,581	40,433	39,636	33,309	24,362	22,937	22,844	-93	-0.4%
Unemployment Rate	13.9%	11.1%	9.8%	9.5%	7.9%	5.8%	5.3%	5.2%	-0.1%	na

**Note: Monthly data averaged by year*

Data: Bureau of Labor Statistics

Quarterly Labor Market Data

	1st Quarter 2016	2nd Quarter 2016	3rd Quarter 2016	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	426,503	429,263	438,270	433,340	435,242	1,902	0.4%	8,739	2.0%
Employment	403,343	407,859	412,594	411,833	410,845	-988	-0.2%	7,501	1.9%
Unemployment	23,160	21,405	25,676	21,507	24,397	2,890	13.4%	1,238	5.3%
Unemployment Rate	5.4%	5.0%	5.9%	5.0%	5.6%	0.6%	na	0.2%	na

**Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics












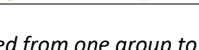
Monthly Labor Market Data

	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	424,034	425,719	429,756	424,234	429,810	433,746	438,886	438,220	437,705	436,073	431,709	432,239	434,176	435,268	436,282
Employment	401,158	403,342	405,530	404,386	409,537	409,653	411,723	412,245	413,814	412,326	411,684	411,489	407,738	410,386	414,410
Unemployment	22,876	22,377	24,226	19,848	20,273	24,093	27,163	25,975	23,891	23,747	20,025	20,750	26,438	24,882	21,872
Unemployment Rate	5.4%	5.3%	5.6%	4.7%	4.7%	5.6%	6.2%	5.9%	5.5%	5.4%	4.6%	4.8%	6.1%	5.7%	5.0%

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

Data: Bureau of Labor Statistics

Macomb County 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	14,754	14,257	15,085	14,694	18,850		27.8%	32.2%
Agriculture	188	187	149	183	315		67.6%	68.4%
Business & finance	734	587	645	701	903		23.0%	53.8%
Construction	151	176	184	162	241		59.6%	36.9%
Customer service	3,406	3,260	3,792	3,749	241		-92.9%	-92.6%
Education	182	161	306	337	247		35.7%	53.4%
Energy	5	17	4	6	16		220.0%	-5.9%
Engineers & designers	1,311	1,181	1,108	1,102	1,720		31.2%	45.6%
Health care	1,996	1,839	2,055	1,999	3,081		54.4%	67.5%
Information technology	992	1,336	1,300	1,104	1,547		55.9%	15.8%
Skilled trades & technicians	869	820	771	784	1,042		19.9%	27.1%
Transportation, distribution, and logistics	1,195	1,365	1,533	1,202	1,377		15.2%	0.9%

**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.*

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