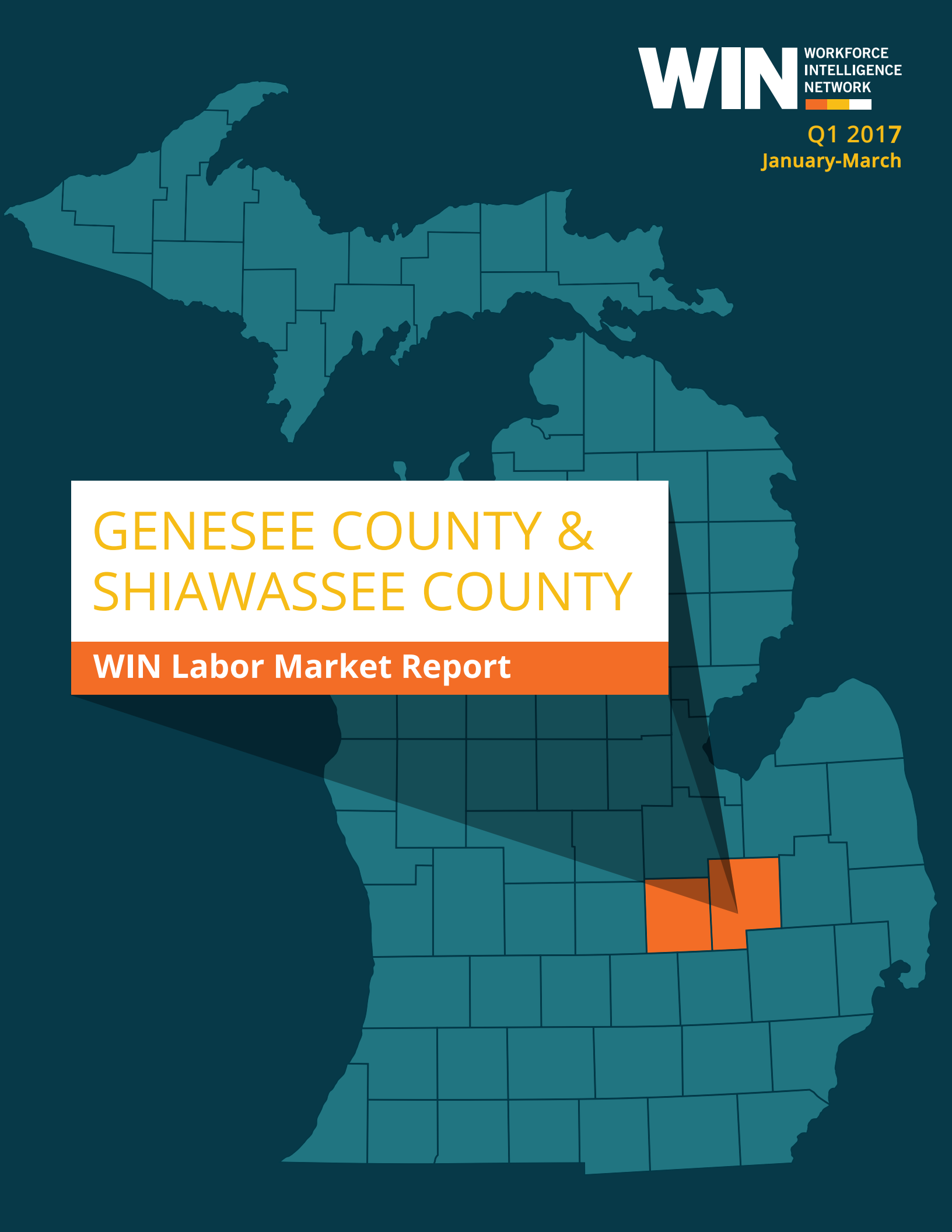


# GENESEE COUNTY & SHIAWASSEE COUNTY

## WIN Labor Market Report





# Introduction: Genesee and Shiawassee County

## About this report

The Workforce Intelligence Network (WIN) partnership is a collaboration of Michigan Works! Agencies (MWAs) and community colleges across a 16 county region in Michigan. The counties in the 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 Genesee and Shiawassee Counties combined, with special sections devoted to five 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 & 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: Genesee and Shiawassee County

## 2016 Year in Review

Overall job postings ultimately experienced a strong growth trend throughout 2016. The greatest increase was between Q2 and Q3 2016, followed by a slight decline in demand which then rebounded into Q1 2017. Since Q1 2016, Genesee and Shiawassee counties have gained about 1,400 online job postings, a 24 percent increase. Specific occupation groups varied greatly in demand. Business and Finance postings decreased for the first three quarters of 2016, falling from 242 postings to 171. Since Q4 2016, employer demand has been increasing for this group; in Q1 2017, demand beat Q1 2016 levels by 17 postings. Engineers and Designers declined in demand by 30 percent throughout 2016, moving from 149 postings in Q1 2016 to 104 in Q1 2017. Health care job postings increased every quarter in 2016, experiencing a 72 percent growth in demand from 925 postings in Q1 2016 to 1,589 in Q1 2017. Employer demand for Information technology jobs grew 32 percent through the first three quarters of 2016. There was a sharp drop to 174 ads in Q4, but increases returned for Q1 2017. Skilled trades occupations began 2016 with 247 online job ads, but fell into Q2 2016 with only 167. Rebounding through Q3, posting levels reached a new high of 265 in Q4 2017. Q1 2017 did not meet this number of postings, but was still two percent higher than Q1 2016 levels.

The labor force in Genesee and Shiawassee counties increased 0.5 percent over the course of 2016, gaining 1,152 individuals for a total of 217,582. This increase mainly occurred between Q1 and Q2 2016, as the labor force levels have been slightly lower since Q3 2016. Employment varied by about 2,000 individuals each quarter, ultimately experiencing a modest 0.4 percent gain between Q1 2016 and Q1 2017. Given labor force increases during 2016 as well as employment volatility, both the annual and quarterly unemployment rates experienced slight increases.

## Key Findings for Q1 2017

### **Registered Nurses take over as top in-demand job with large jump in postings.**

Always an occupation in high demand within the Health Care group, Registered Nurses have overtaken truck drivers as the top job in these counties overall. Employers in the two counties posted an additional 220 job ads for nurses in Q1 2017, which is a 62 percent jump from Q4 2016 postings. See page 17 for more details.

### **Demand for Health Care occupations increased 32 percent between Q4 2016 and Q1 2017.**

While Registered Nurses in particular are growing in demand, Health Care employers in Genesee and Shiawassee counties are hiring for many occupations across all experience and education levels. Health Care occupations offer opportunities for advancement and wage increases with higher levels of education and more experience, as well as record levels of employment. See page 16 for more details.

### **Demand for IT workers in Genesee and Shiawassee counties continued its slow rise during Q1 2017.**

Online job postings in the IT occupation group increased 8.6 percent to Q1 2017. The IT occupations are some of the highest paid in Genesee and Shiawassee counties, with a median advertised salary of \$71,860 in Q1 job postings. This quarter, these occupations were more focused on business administration, with business intelligence analysts entering the top 5 jobs. See page 21 for more details.

### **Employer demand for Skilled Trades and Engineers and Designers decreased, but employment is stable.**

Genesee and Shiawassee county employers posted 19.5 percent fewer ads for Engineers and Designers this quarter, and 4.5 percent fewer for Skilled Trades positions. However, both are recently following periods of unusually high demand, and employment in both occupation groups grew slightly.

### **Many growing occupations in Genesee and Shiawassee counties require a bachelor's degree.**

The Business and Finance, Engineering and Design, and IT occupation groups had many postings requiring a bachelor's degree. Some Health Care occupations are attainable with an associate's degree and most entry-level Skilled Trades jobs require just a high school diploma paired with on-the-job training.

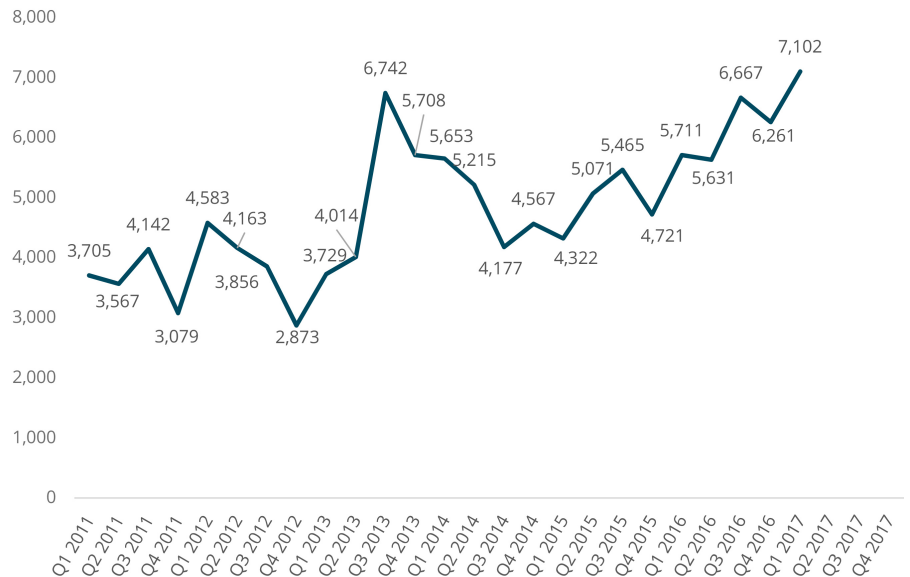


# Workforce and Employer Demand Indicators

## Postings over time

Online job postings for all occupations in Genesee and Shiawassee Counties in Q1 2017 saw an increase of 13.4 percent (874) from the previous quarter. The 7,102 postings overshadowed demand in Q1 2016 by nearly 1,400 postings as well as creating a new record high. The previous high, in Q3 2013, was 6,742 online job postings.

## Genesee and Shiawassee County Online Job Postings



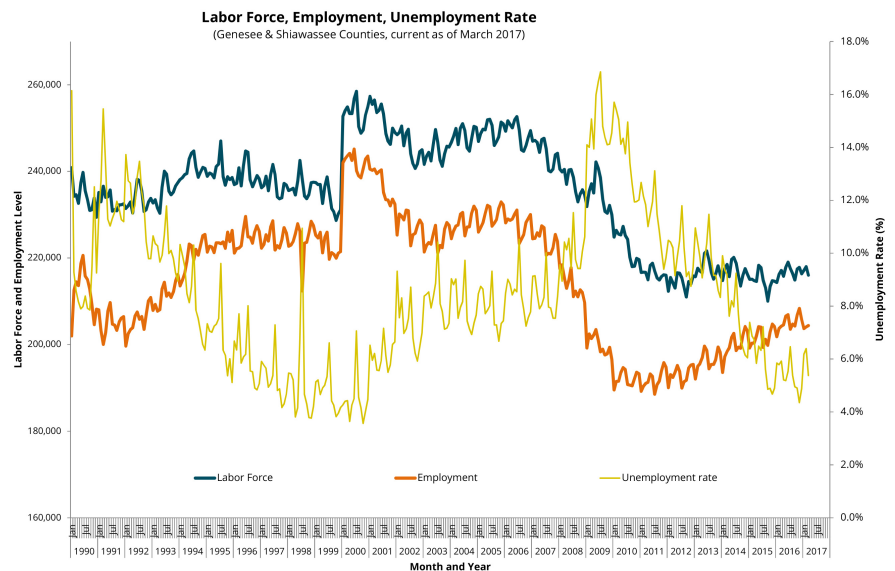
## Labor force/employment/unemployment

The labor force in Genesee and Shiawassee Counties shrank by 156 individuals (-0.1 percent) to 217,059 between Q4 2016 and Q1 2017, but overall has grown by 1,152 individuals (0.5 percent) in the last year. Employment shrank similarly, losing 2,906 employees between quarters (-1.4 percent) but gaining 793 (0.4 percent) over the full year for a total of 204,067. These shifts in the Genesee and Shiawassee county labor markets meant that the unemployment rate increased noticeably from 4.7 percent to 6 percent.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Labor Force, Employment, Unemployment Rate

Quarter 1 2017



Data: BLS  
Analysis: Workforce Intelligence Network





1,152 new individuals employed  
between 2016 and 2017

13.4%  
increase in online job postings



### Analysis

Registered Nurses displaced Heavy and Tractor-Trailer Truck Drivers as the most in-demand occupation in these counties with 575 job ads. Retail salespersons were second most demanded, while heavy and tractor-trailer truck drivers are now third.

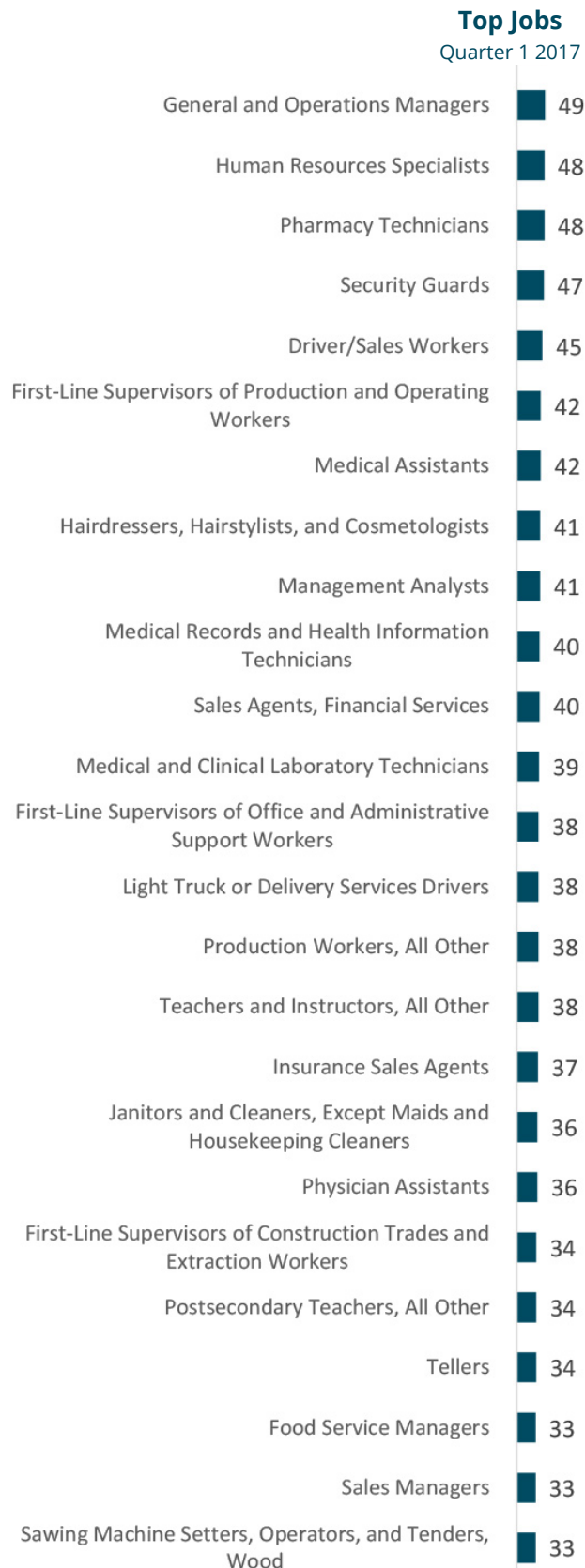
*Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network*



All-time high in employer demand



Registered Nurses new overall top job



Data: Burning Glass Technologies  
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.

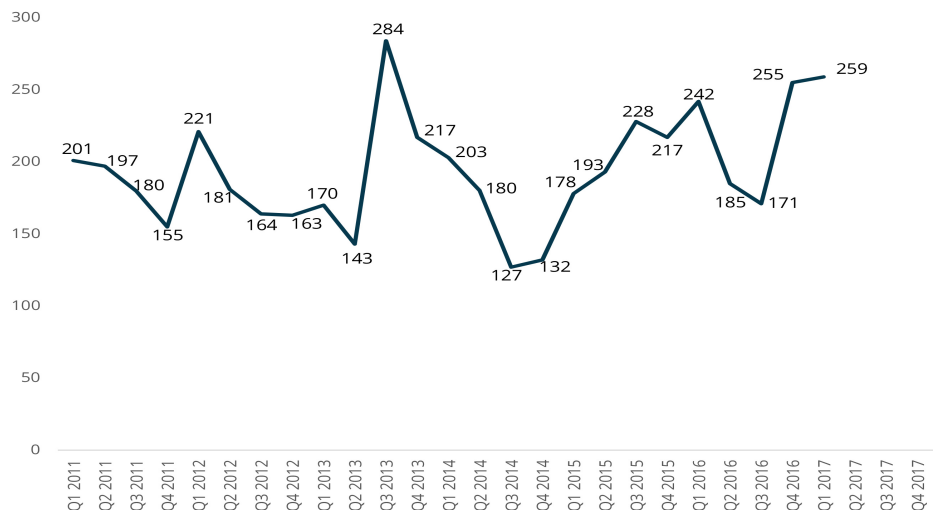
## Job Posting Analysis

Online job ads for occupations related to Business & Finance increased slightly to 259 during Q1 2017, from 255 during Q4 2016. Despite some volatility in this industry, demand this quarter was higher than the 242 online postings for Business & Finance-related occupations during the first quarter of 2016.

## Employment Analysis

Employment in Business and Finance related occupations has followed a steady upward trajectory for the seventh consecutive year since the depths of the Great Recession in 2009. Only 4,928 workers were employed in Business and Finance jobs in 2009, and in 2017 employment reached 5,620, a 14 percent increase.

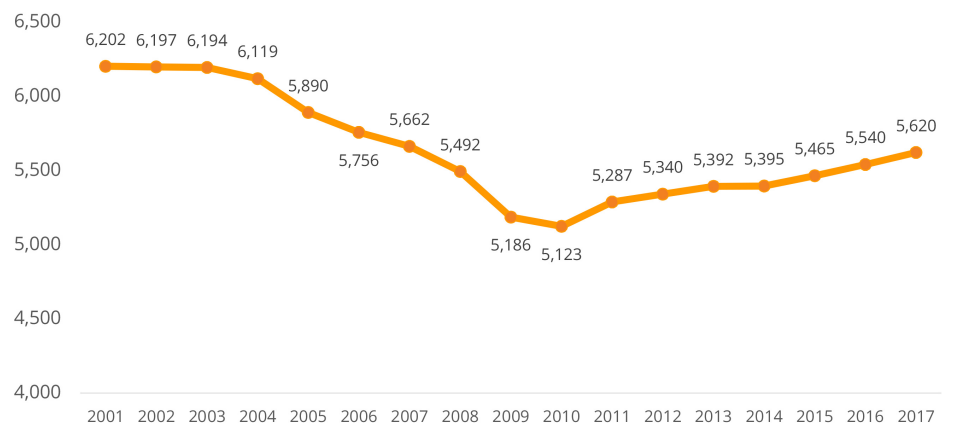
### Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Employment Over Time

Quarter 1 2017



Data: EMSI  
Analysis: Workforce Intelligence Network



Seven years of steady  
employment growth

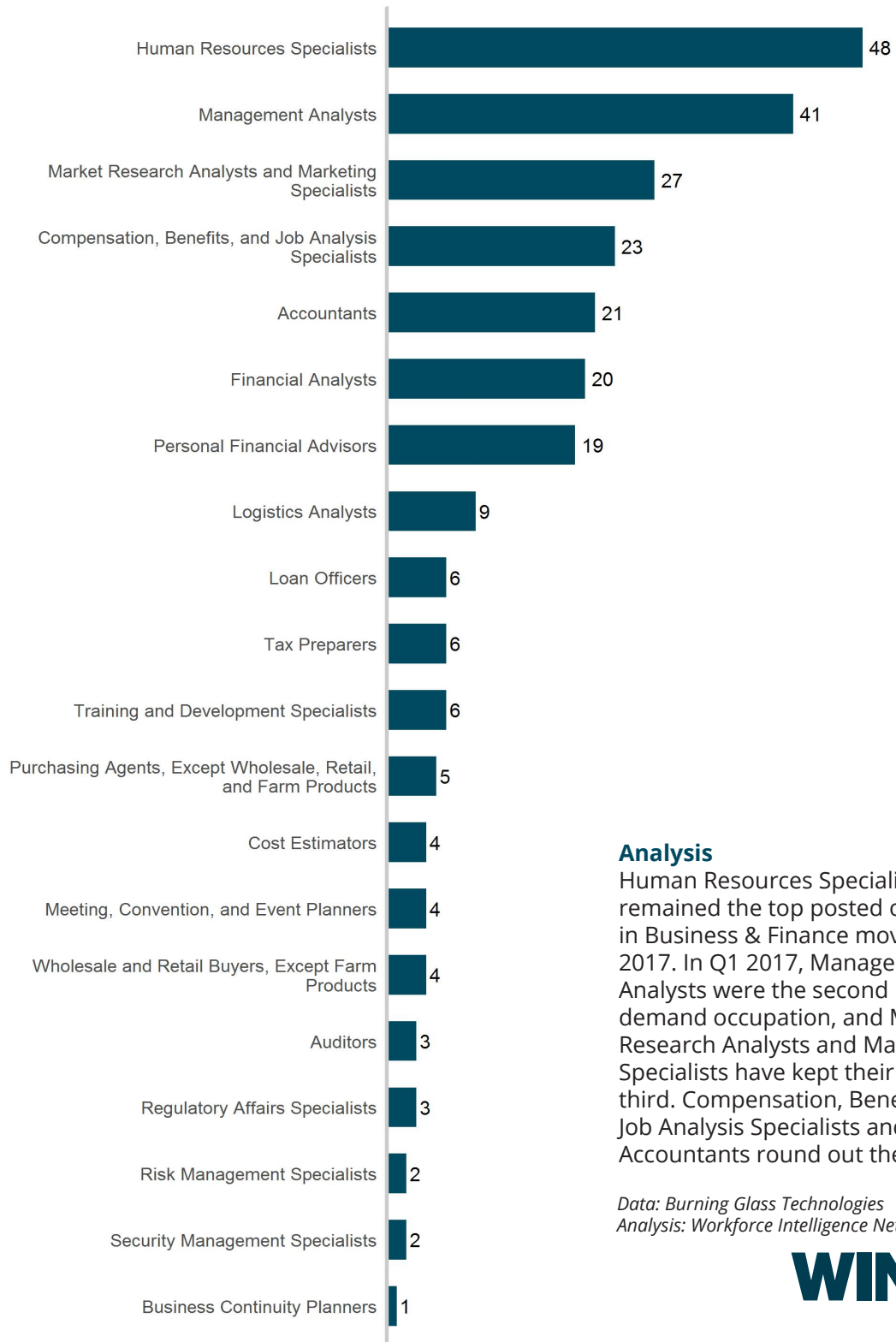


259 online job postings

## Business & Finance

### Top Jobs

Quarter 1 2017



### Analysis

Human Resources Specialists remained the top posted occupation in Business & Finance moving into 2017. In Q1 2017, Management Analysts were the second most in-demand occupation, and Market Research Analysts and Marketing Specialists have kept their spot as third. Compensation, Benefits and Job Analysis Specialists and Accountants round out the top five.

Data: Burning Glass Technologies

Analysis: Workforce Intelligence Network



Entry level openings available:  
under 5 years experience needed

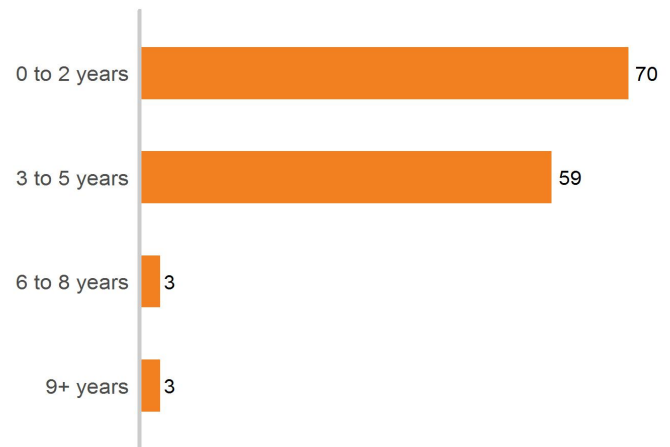
71%  
of job postings require  
a bachelor's degree

## Business & Finance Educational Attainment Required

Of the 135 Business and Finance job postings that specified a desired experience level during Q1 2017, 96 percent were available to workers with less than five years of experience. Fifty-one percent were open to those with zero to two years.

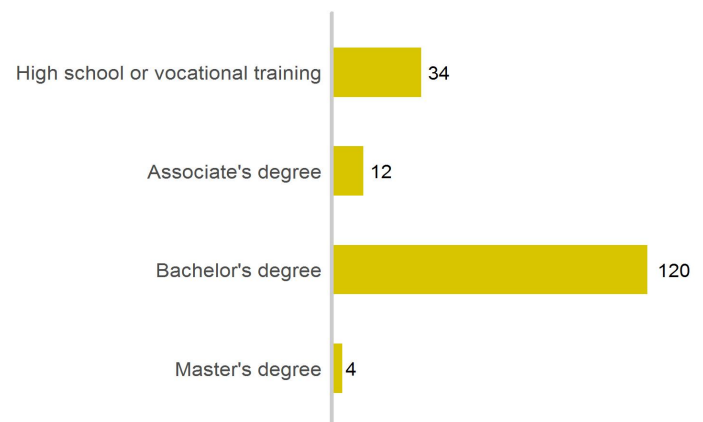
These entry-level Business and Finance positions prefer Genesee and Shiawassee county workers who are willing to pursue a bachelor's degree, with 71 percent of postings that specified education directed toward this level.

### Experience Required



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Educational Attainment



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### In-Demand Area of Study

- Business Administration and Management
- Accounting
- Finance
- Computer Science
- Human Resources Development



Desired skills: Customer Service and Accounting



Top Degree: Business Administration and Management

## Business & Finance In-Demand Skills

Occupations in Business and Finance require an array of skills key to efficiently managing and growing a business. These proficiencies include both numerical skills such as accounting and budgeting, and interpersonal skills such as customer service. Employers hiring Business and Finance workers often desire employability skills based on working well in a team and paying attention to detail.

### Technical In-Demand Skills

- Microsoft Office
- Customer service
- Accounting
- Budgeting
- Financial analysis

### Foundational In-Demand Skills

- Communication skills
- Writing
- Computer skills
- Detail oriented
- Building effective relationships

### Job Type

- Temporary: 11.6%
- Full-time: 66%
- Part-time: 0.8%

### Certifications Required

- Certified Public Accountant (CPA)
- Series 7
- Certified Financial Planner
- Investment Advisor
- Professional in Human Resources



Top Certification: CPA



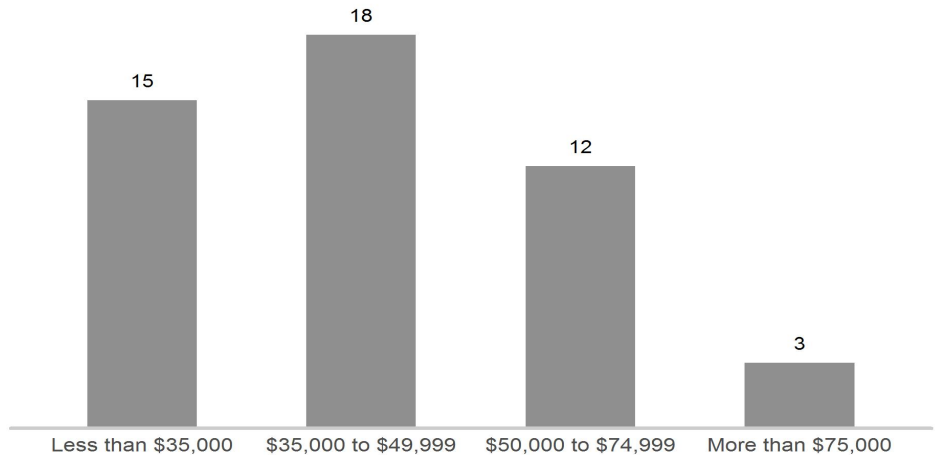
Average Advertised Salary:  
\$43,168

## Business & Finance Wages

The mean salary posted in Business and Finance job ads that specified one was \$43,168. Of the 259 postings, only 48 listed salary information, and among those there was considerable variety in pay. Salaries for entry-level jobs in Business and Finance are competitive across all industries throughout Genesee and Shiawassee counties, although education requirements may be entry-prohibitive.

## 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	\$16.68	\$21.42	\$27.91	\$35.97	\$46.11
13-1111	Management Analysts	\$23.72	\$30.57	\$39.02	\$49.68	\$63.66
13-1161	Market Research Analysts and Marketing Specialists	\$18.52	\$23.66	\$32.02	\$42.59	\$52.77
13-1141	Compensation, Benefits, and Job Analysis Specialists	\$20.53	\$24.42	\$29.83	\$38.27	\$47.33
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
13-2052	Personal Financial Advisors	\$20.28	\$26.19	\$33.25	\$57.74	\$79.47
13-1081	Logistics Analysts	\$23.56	\$30.80	\$40.71	\$48.65	\$56.46
13-2072	Loan Officers	\$13.34	\$18.11	\$23.63	\$32.62	\$49.76
13-2082	Tax Preparers	\$10.08	\$11.56	\$15.42	\$25.36	\$38.65

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.

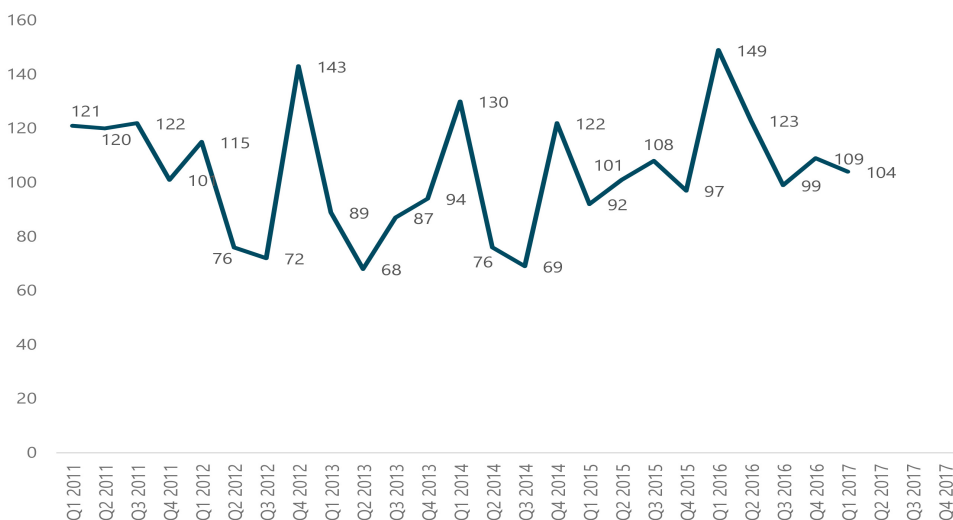
## Job Posting Analysis

Online job ads for Engineers and Designers were down 19.5 percent to 104 during Q1 2017, compared to 109 postings at the end of 2016. Demand in this group has been somewhat volatile: this level is similar to most quarters since early 2015, but is 30 percent lower than the 149 online postings for Engineers and Designers in Q1 2016.

## Employment Analysis

Employment in occupations related to Engineers and Designers grew modestly between 2016 and 2017, gaining 18 positions for 1,469 in total. A downward trend of employment in Genesee and Shiawassee Counties began in 2001 when employment peaked at 5,947 jobs, well before the Great Recession of 2009. The consistent but slow-growing employment since 2009 reflects the decline in the region's historically strong manufacturing presence.

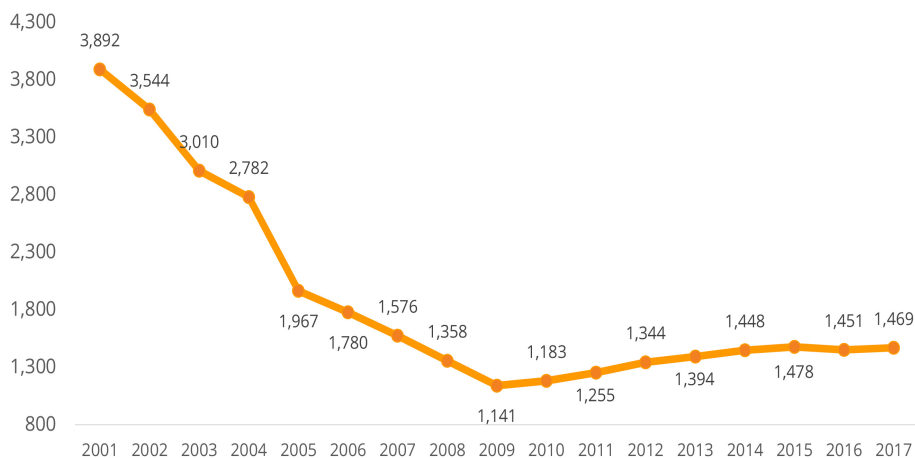
## Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Employment Over Time

Quarter 1 2017



Data: EMSI  
Analysis: Workforce Intelligence Network





Most desired experience:  
3 to 5 years

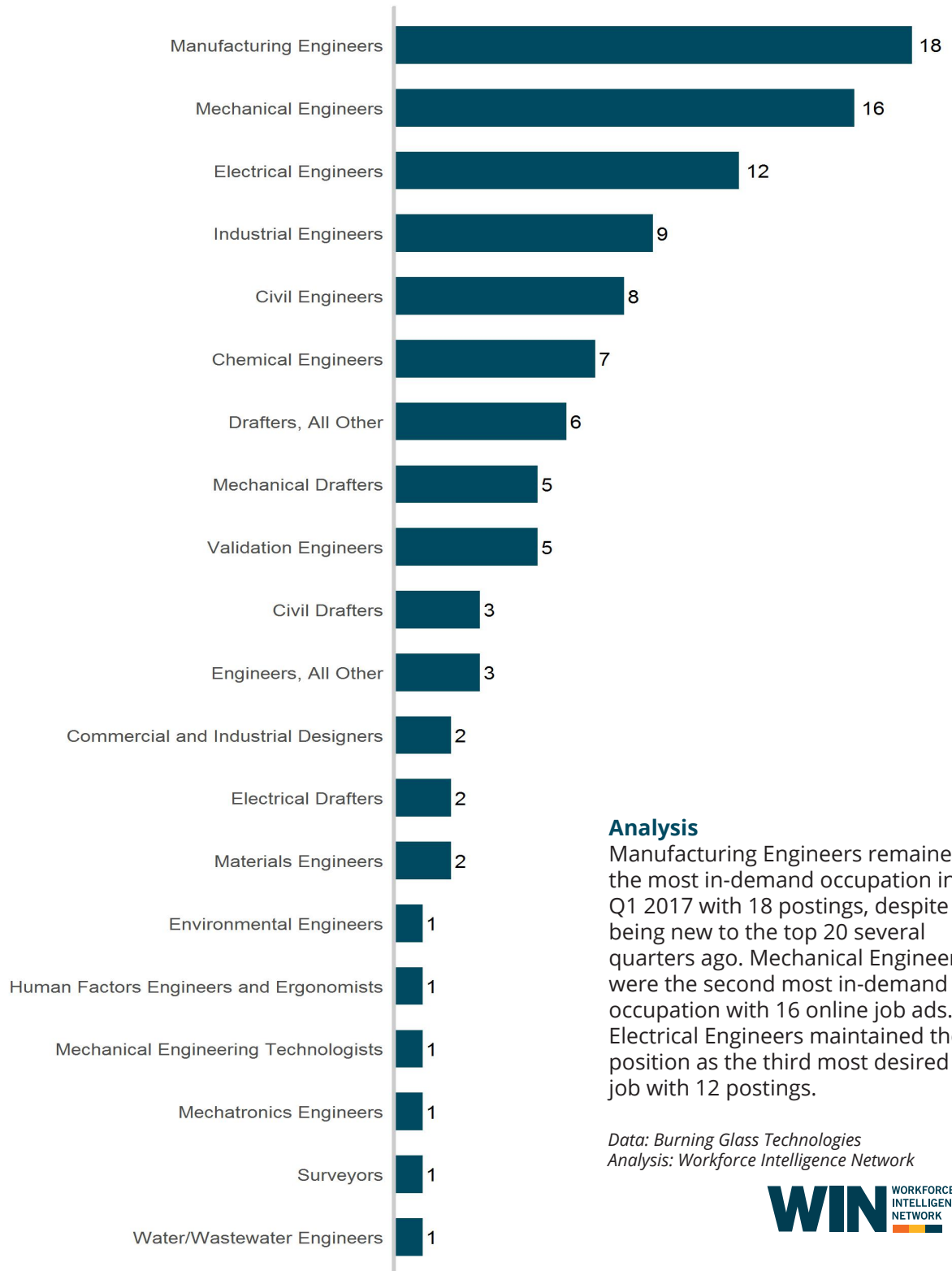


104 online job postings

## Engineers & Designers

### Top Jobs

Quarter 1 2017



### Analysis

Manufacturing Engineers remained the most in-demand occupation in Q1 2017 with 18 postings, despite being new to the top 20 several quarters ago. Mechanical Engineers were the second most in-demand occupation with 16 online job ads. Electrical Engineers maintained their position as the third most desired job with 12 postings.

Data: Burning Glass Technologies

Analysis: Workforce Intelligence Network





In-demand education:  
bachelor's degree

70%  
of advertised salaries  
>\$50,000

## Engineers & Designers Educational Attainment Required

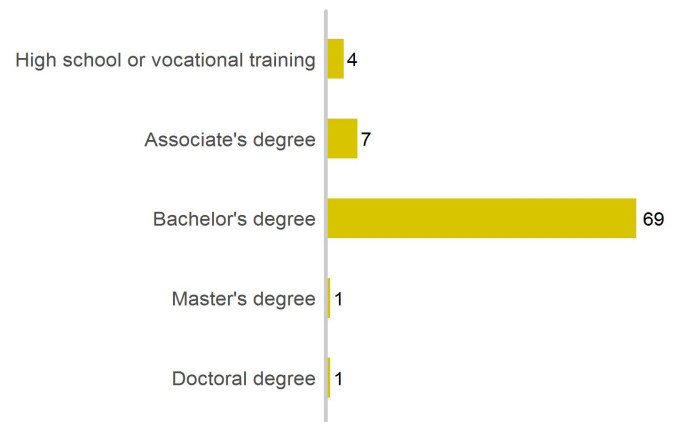
Of the Engineers and Designer job postings that specified a desired experience level during Q1 2017, 80 percent required five years of experience or less. The most popular level of experience in-demand was three to five years with 43 postings.

Education is key to augment experience for engineers. 84 percent of ads that specified education, or 69 postings, required a bachelor's degree. The near universal requirement for moderate experience and a college education matches industry trends for engineering related occupations, highlighting the need for incoming students to seek work experience before leaving school.

### In-Demand Areas of Study

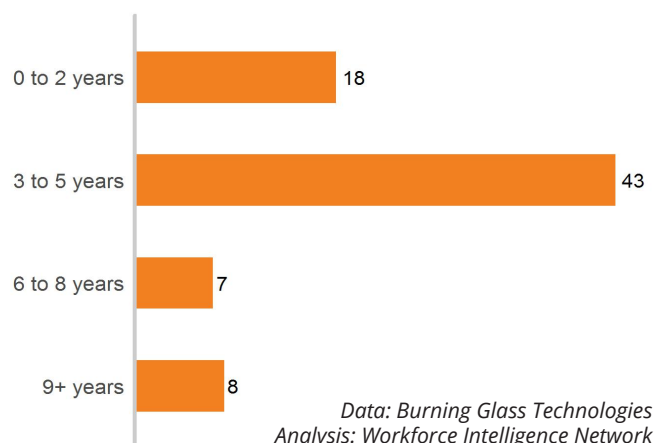
- Engineering
- Mechanical Engineering
- Electrical and Electronic Engineering Technologies/Technicians, other
- Industrial and Product Design
- Manufacturing Engineering

### Educational Attainment



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Experience Required



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Top skills: AutoCAD,  
manufacturing processes

75%  
of job ads for full-time  
employment

### Engineers & Designers In-Demand Skills

Engineer and Design occupations require a wide array of skills, from the highly technical to those common to most employees in a 21st Century workplace. Advanced knowledge of manufacturing processes, AutoCAD, and computer aided Drafting/design (CAD) is desired, as are skills in Microsoft Office and scheduling. Employers hiring Engineers and Designers often post employability skills like communication skills, problem solving, writing, meeting deadlines, and organizational skills.

#### Technical In-Demand Skills

- AutoCAD
- Microsoft Office
- Manufacturing Processes
- Industrial engineering industry experience
- Computer Aided Drafting/Design (CAD)

#### Foundational In-Demand Skills

- Communication Skills
- Problem Solving
- Mathematics
- Writing
- Planning

#### Job Type

- Temporary: 2.9%
- Full-time: 75.0%
- Part-time: 2.9%

#### Certifications Required

- American Board for Engineering and Technology (ABET) Accredited
- Certified Energy Manager
- Certified Quality Auditor/Certified Quality Engineer
- Professional Engineer
- Six Sigma Black Belt



Top certification:  
ABET Accredited



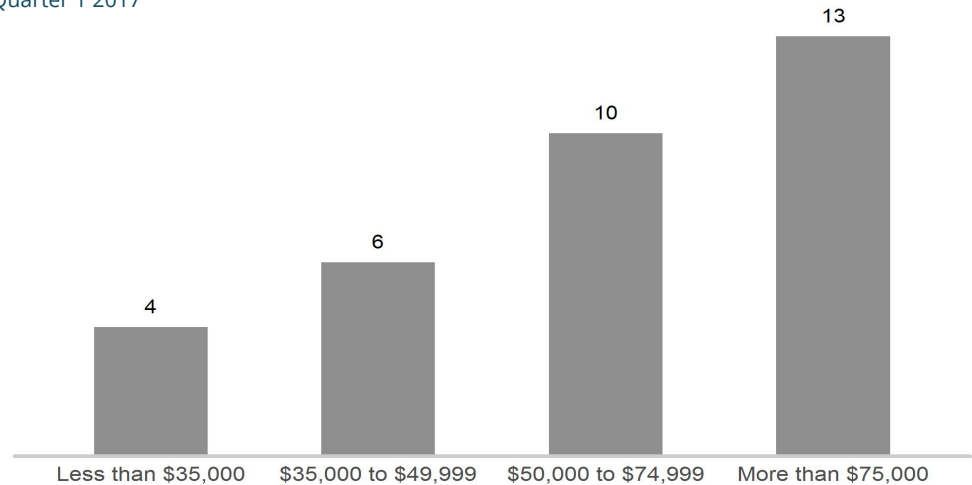
Top Degree: Engineering

## Engineers & Designers Wages

Of the 33 online job ads that listed salary information, most (70 percent) offered over \$50,000 annually. With a mean real-time salary for Engineers and Designers of \$67,950, it remains a field well worth the educational investment necessary for entry. Six of the ten top jobs have median wages over \$40 hourly, with the potential to increase to over \$60. Even starting wages for half of the top occupations in the Engineers and Designers group are over \$25 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
17-2199	Manufacturing Engineers	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
17-2141	Mechanical Engineers	\$29.12	\$36.05	\$44.27	\$53.43	\$60.42
17-2071	Electrical Engineers	\$28.97	\$34.90	\$42.69	\$50.55	\$60.05
17-2112	Industrial Engineers	\$30.15	\$36.92	\$43.89	\$52.36	\$59.16
17-2051	Civil Engineers	\$24.61	\$29.18	\$34.59	\$40.59	\$48.81
17-2041	Chemical Engineers	\$28.79	\$33.66	\$40.23	\$49.17	\$62.00
17-3019	Drafters, All Other	\$13.86	\$16.38	\$19.37	\$24.51	\$28.96
17-3013	Mechanical Drafters	\$16.00	\$20.99	\$27.22	\$34.15	\$39.73
17-2199	Validation Engineers	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
17-3011	Civil Drafters	\$16.22	\$18.97	\$22.09	\$26.25	\$30.86

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.

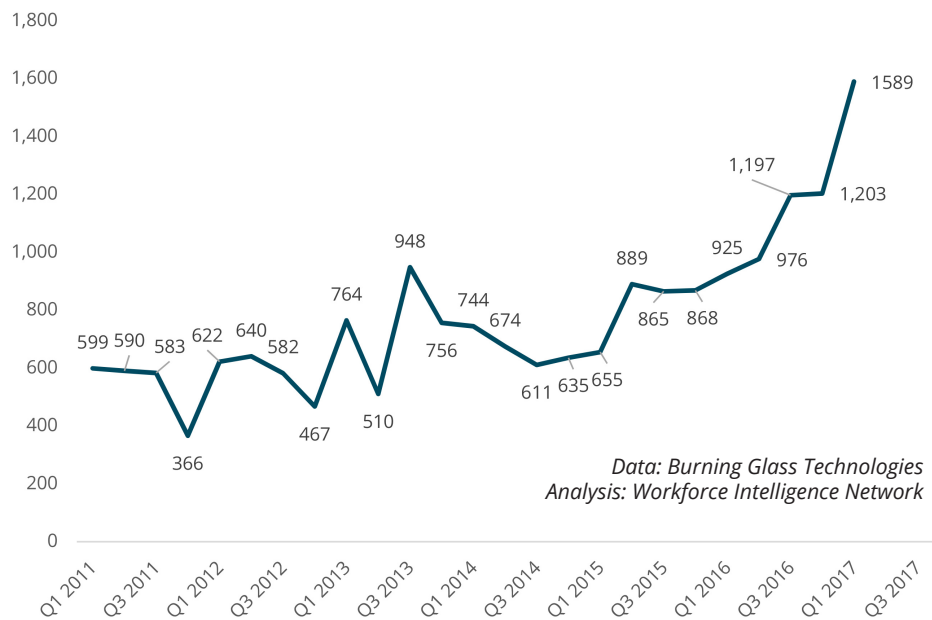
## Job Posting Analysis

Online job ads for Health Care continued to grow, reaching a new high of 1,589 during Q1 2017. This is a 32 percent growth from the 1,203 postings during Q4 2016. Current demand is over 650 more postings than one year ago, in Q1 2016.

## Employment Analysis

With 20,409 jobs, 2017 continues to set peak employment in Health Care, exceeding the previous high of 20,092 jobs in 2016. Employment has shown consistent growth since 2013, and is now 7 percent higher than the 19,061 persons employed in healthcare that year.

## Online Job Postings



## Employment Over Time

Quarter 1 2017

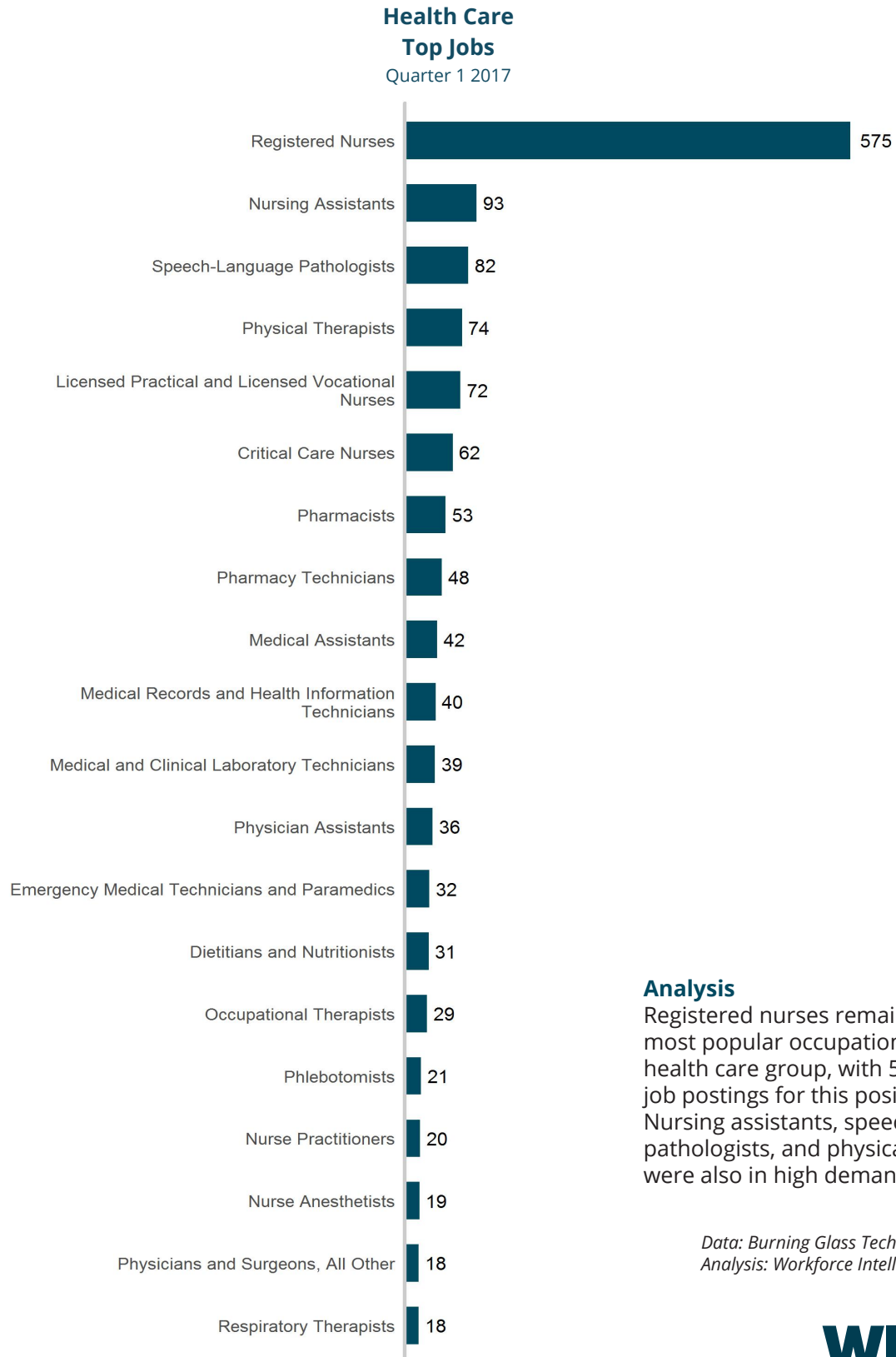




## Registered Nurses: Top Job



Help wanted:  
32% increase in job postings



### Analysis

Registered nurses remain by far the most popular occupation in the health care group, with 575 online job postings for this position. Nursing assistants, speech-language pathologists, and physical therapists were also in high demand.

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



0 to 2 years: Most desired experience

80%  
of jobs request  
associates degree or less

## Health Care Education and Experience

Almost all of the Health Care job postings that specified a desired experience level during Q1 2017 were available to workers with under two years of experience.

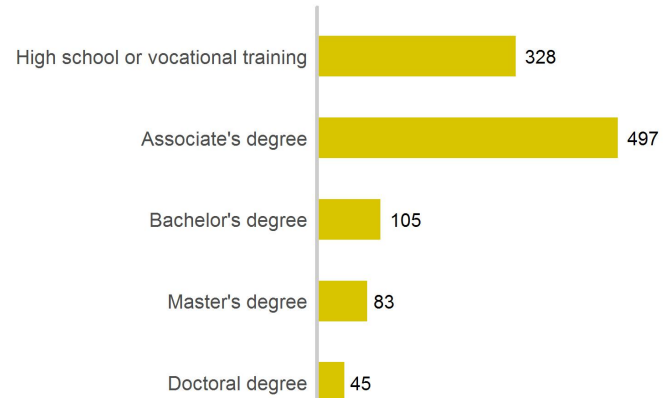
Additionally, 80 percent of postings indicating a desired educational attainment level were open to workers with an associate's degree or less.

The high rate of positions requiring minimal education and experience combined with the steady employment growth make health care occupations a strong prospect for many workers.

### In-Demand Areas of Study

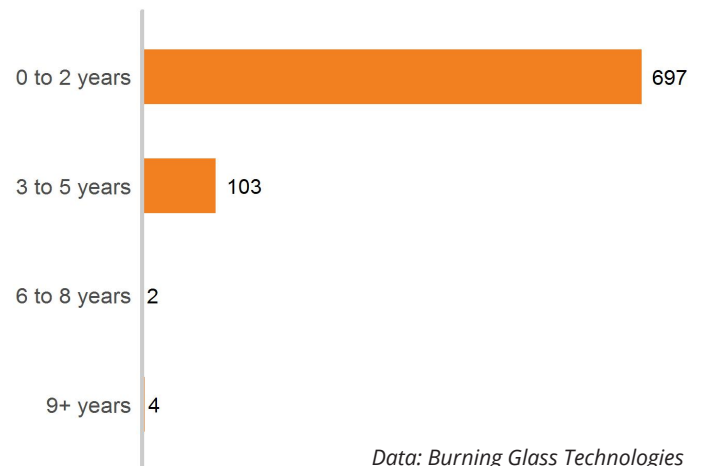
- Nursing Science
- Physical Therapy/Therapist
- Pharmacy
- Clinical/Medical Laboratory Technician
- Health/Health Care Administration/Management

### Educational Attainment



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Experience Required



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



## Top Area of Study: Nursing Science



## In-demand Certifications: RN, CPR

### Health Care In-Demand Skills

The occupations in the Health Care group require a wide array of high-level technical skills necessary to effectively provide care. These skills range from technical medical expertise such as CPR, surgery and disease knowledge to interpersonal and organizational skills like patient care and case management. Employers hiring Health Care workers often post complementary employability skills seeking effective communicators and planners.

#### Technical In-Demand Skills

- Patient care and preparation, treatment planning
- Surgery
- Case Management
- Cardiopulmonary resuscitation (CPR)
- Knowledge of communicable diseases

#### Foundational In-Demand Skills

- Communication skills
- Organizational skills, planning
- Quality assurance and control
- Analytical skills
- Detail-Oriented

#### Job Type

- Temporary: 15.9%
- Full-time: 63.9%
- Part-time: 13.5%

#### Certifications Required

- Registered Nurse (RN)
- First aid CPR AED
- Basic Life Support Certification
- Certified Nursing Assistant
- Emergency Medical Technician (EMT)



49%  
of advertised salaries  
>\$50,000

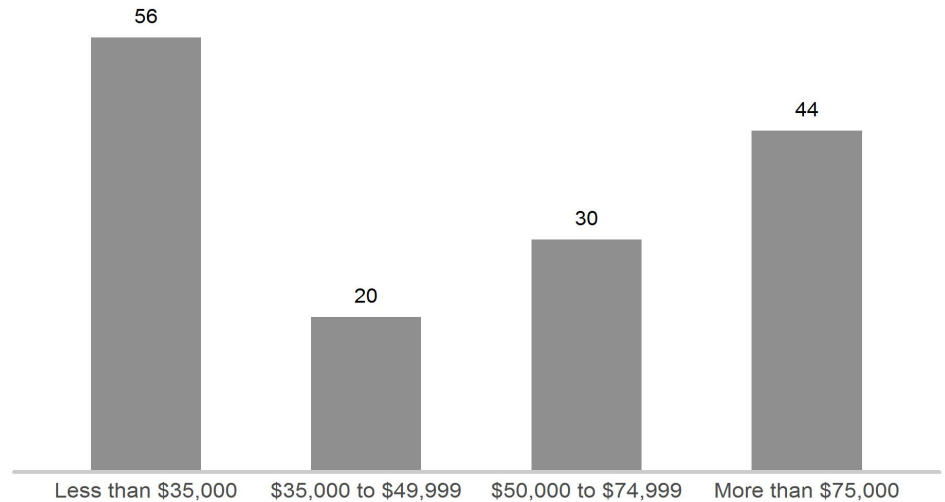
  
\$58,438: average advertised  
salary

## Health Care Wages

Salary data, where advertised, was fairly evenly distributed this quarter. Of the 1,589 postings, only 150 specified a salary. The mean advertised salary was \$58,438 annually, with 51 percent of postings offering below \$50,000 and 49 percent above. The near equal grouping of salary levels above and below \$50,000 per year shows that despite low education and experience requirements for entry into Health Care occupations, there is plenty of room for advancement 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
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
29-1127	Speech-Language Pathologists	\$25.14	\$29.92	\$36.14	\$43.81	\$61.10
29-1123	Physical Therapists	\$27.34	\$33.06	\$39.92	\$49.33	\$62.25
29-2061	Licensed Practical and Licensed Vocational Nurses	\$18.51	\$20.51	\$23.28	\$26.23	\$28.45
29-1141	Critical Care Nurses	\$25.13	\$28.55	\$33.18	\$38.42	\$46.58
29-1051	Pharmacists	\$42.61	\$50.21	\$55.49	\$60.30	\$66.40
29-2052	Pharmacy Technicians	\$10.04	\$11.90	\$14.61	\$17.31	\$19.25
31-9092	Medical Assistants	\$10.78	\$12.34	\$14.06	\$16.32	\$18.78
29-2071	Medical Records and Health Information Technicians	\$11.74	\$14.25	\$17.98	\$22.66	\$27.43

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.

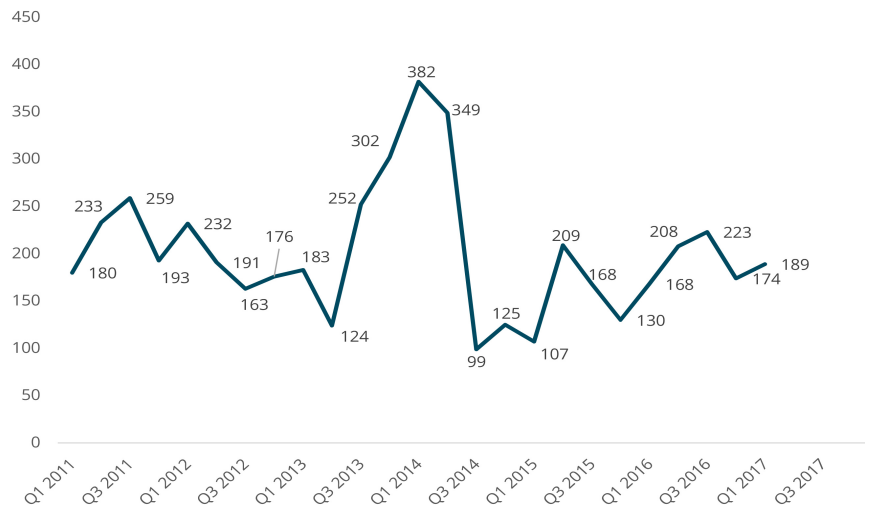
## Job Posting Analysis

Online job ads for occupations related to IT increased 8.6 percent to 189 during Q1 2017, compared to 174 postings during Q4 2016. Postings for IT occupations in Genesee and Shiawassee counties last peaked at 223 postings in Q3 2016.

## Employment Analysis

Employment in IT related fields has enjoyed consistent growth since 2012, the lowest point in the previous 15 years. To continue this pattern, 2017 has reached 3,004 jobs in IT, adding about 100 jobs from 2016 levels.

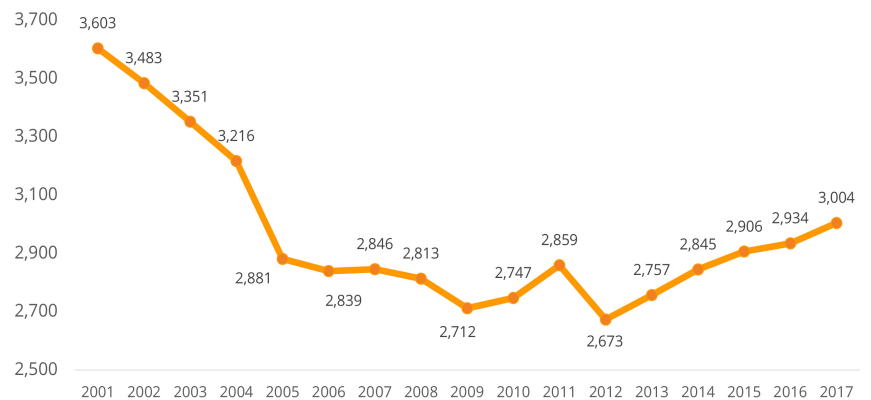
## Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Employment Over Time

Quarter 1 2017



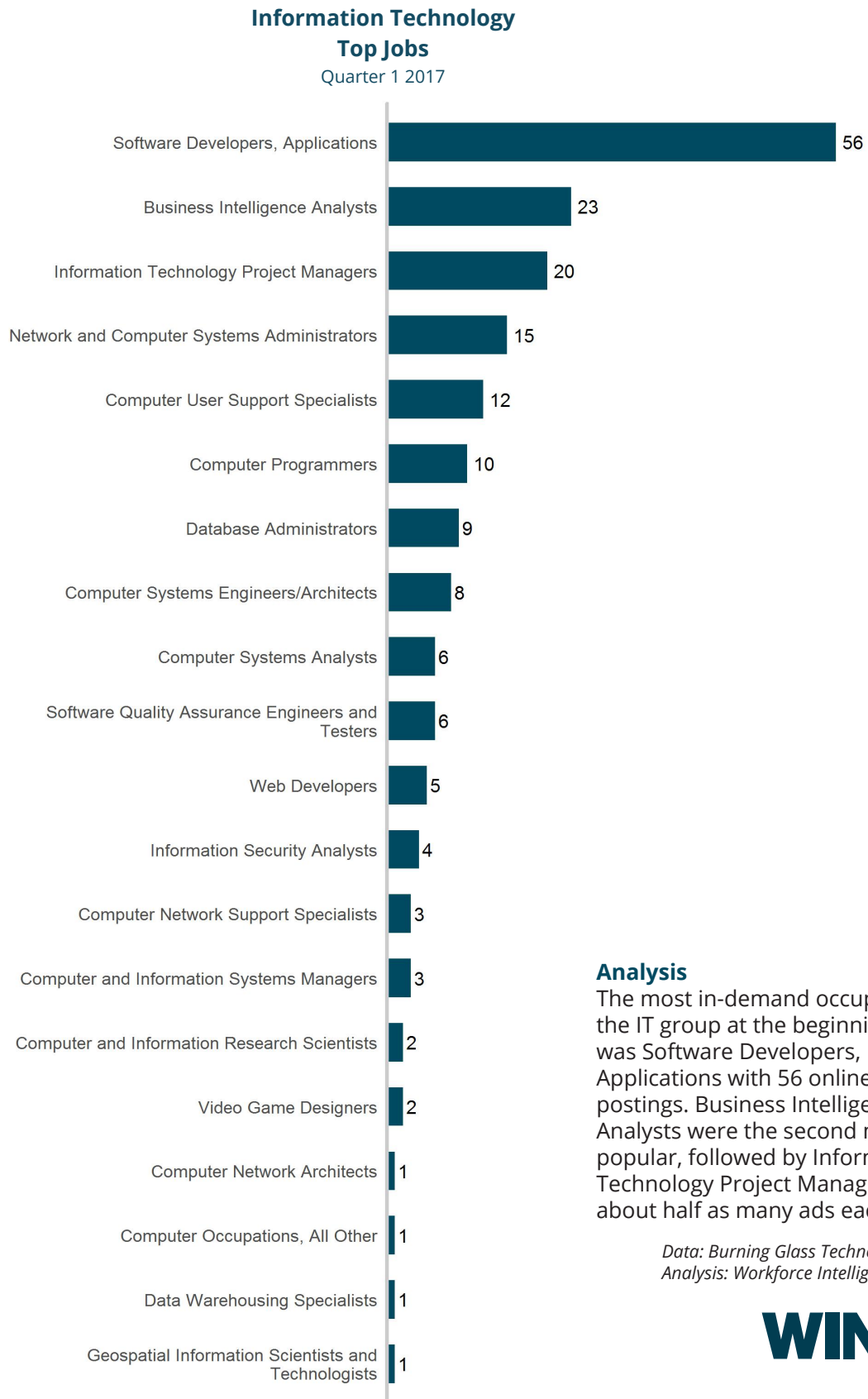
Data: EMSI  
Analysis: Workforce Intelligence Network



Most in-demand job: Software developers, applications



Online job postings increased by 8.6%



### Analysis

The most in-demand occupation in the IT group at the beginning of 2017 was Software Developers, Applications with 56 online job postings. Business Intelligence Analysts were the second most popular, followed by Information Technology Project Managers with about half as many ads each.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Preferred experience: 3 to 5 years

68%  
of postings request  
bachelor's degree

## Information Technology Educational and Experience

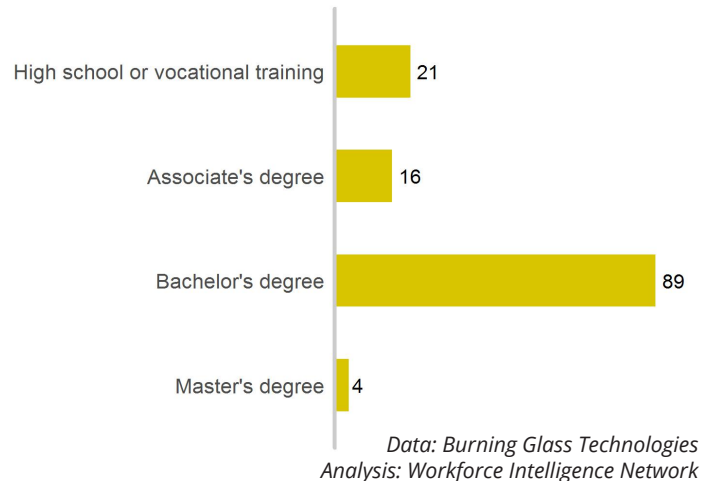
Of the 112 IT job postings that specified a desired experience level during Q1 2017, 93 percent were available to workers with less than 5 years of experience. The majority of those postings request three to five years, perhaps reflecting the high number of postings for project managers.

Sixty-eight percent of jobs specifying educational attainment levels required a bachelor's degree. The premium put on education over experience illustrates that if workers are willing to pursue the necessary education, there is little difficulty finding employment in IT-related fields.

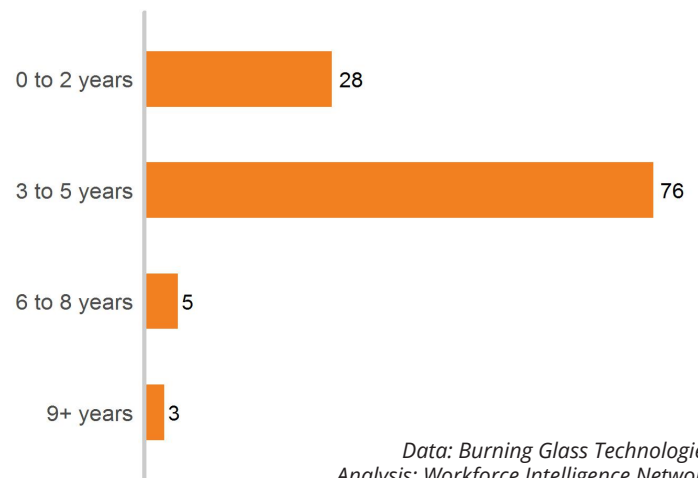
### In-Demand Areas of Study

- Computer Science
- Business Administration and Management
- Information Technology
- Engineering
- Management Information Systems

### Educational Attainment



### Experience Required





Knowledge areas: computer science, business administration

48%  
of advertised salaries  
>\$75,000

### Information Technology In-Demand Skills

IT occupations require highly technical skills, explaining the high levels of education for entry. Genesee and Shiawassee county employers hiring during Q1 2017 sought prowess with SQL and software engineering. These employers also candidates with the ability to effectively problem solve and communicate their solutions.

#### Technical In-Demand Skills

- SQL, SQL server
- Software engineering
- Information Systems
- Technical Support
- JavaScript

#### Foundational In-Demand Skills

- Communication skills
- Planning
- Writing
- Problem solving, troubleshooting
- Teamwork, collaboration

#### Job Type

- Temporary: 3.7%
- Full-time: 70.3%
- Part-time: 1.6%

#### Certifications Required

- Microsoft Certifications: MCP, MCSE
- Network+ Certified
- Certified A+ Technician
- CISCO Certified Network Associate
- Project Management Certification (E.G. PMP)



## Microsoft certifications in-demand



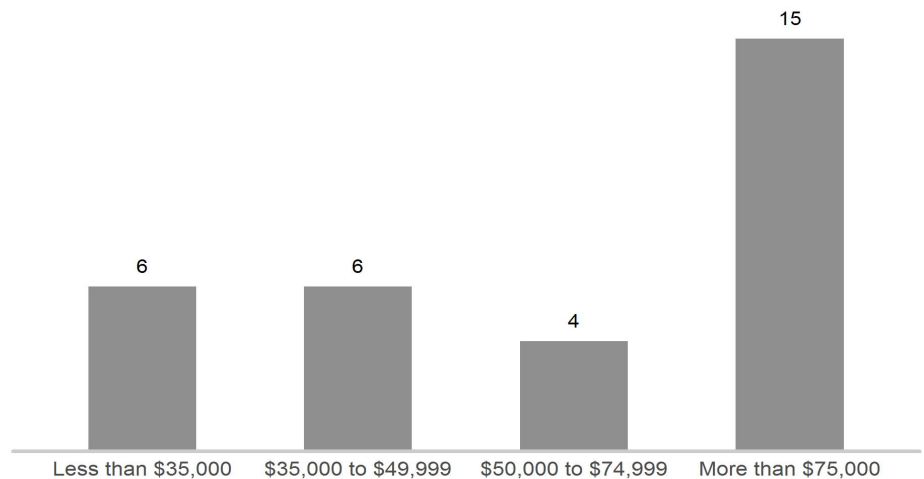
Average advertised salary:  
\$76,181

### Information Technology Wages

### Advertised Wages in Job Postings

Quarter 1 2017

Forty-eight percent of advertised salaries for open IT occupations during Q1 2017 were above \$75,000 per year, with a mean real-time salary of \$76,181. The high salaries despite modest experience requirements makes IT a lucrative field in Genesee and Shiawassee counties for those willing to pursue the necessary training.



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	Business Intelligence Analysts	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1199	Information Technology Project Managers	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1142	Network and Computer Systems Administrators	\$22.44	\$28.27	\$36.76	\$44.60	\$52.88
15-1151	Computer User Support Specialists	\$12.93	\$16.14	\$21.67	\$29.23	\$37.27
15-1131	Computer Programmers	\$21.82	\$26.55	\$33.45	\$41.75	\$48.88
15-1141	Database Administrators	\$25.15	\$32.59	\$42.84	\$51.69	\$59.65
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	Software Quality Assurance Engineers and Testers	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56

Data: EMSI, BLS  
Analysis: Workforce Intelligence Network



# Skilled Trades & Technicians (Manufacturing Focused)

## Introduction

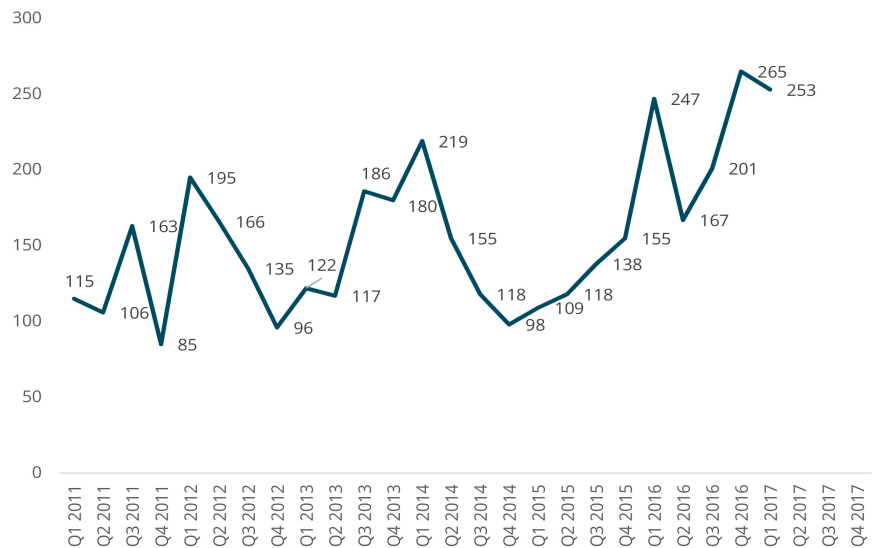
WIN's technicians/skilled trades category includes jobs related to advanced manufacturing. Southeast Michigan has more demand for skilled- trades labor, such as CNC machinists and welders, than almost anywhere else in the country.

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 ads for Skilled Trades occupations fell slightly to 253 postings during Q1 2017 after a dramatic rise between 167 in Q2 2016 and 265 in Q4. Overall, demand for Skilled Trades workers in Genesee and Shiawassee counties has been on the rise since the end of 2014.

### Online Job Postings



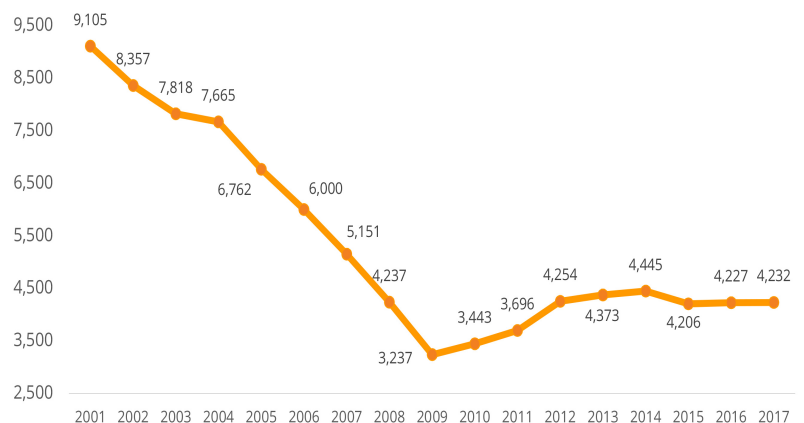
Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Employment Analysis

Employment in Skilled Trades declined steeply between 2003 and 2009, but has made modest gains since the Recession low of 3,237 employed workers. Employment levels have been fairly steady since 2015, and 4,232 individuals were employed in Skilled Trades in 2017.

### Employment Over Time

Quarter 1 2017



Data: EMSI  
Analysis: Workforce Intelligence Network



First-line supervisors of production workers most demanded

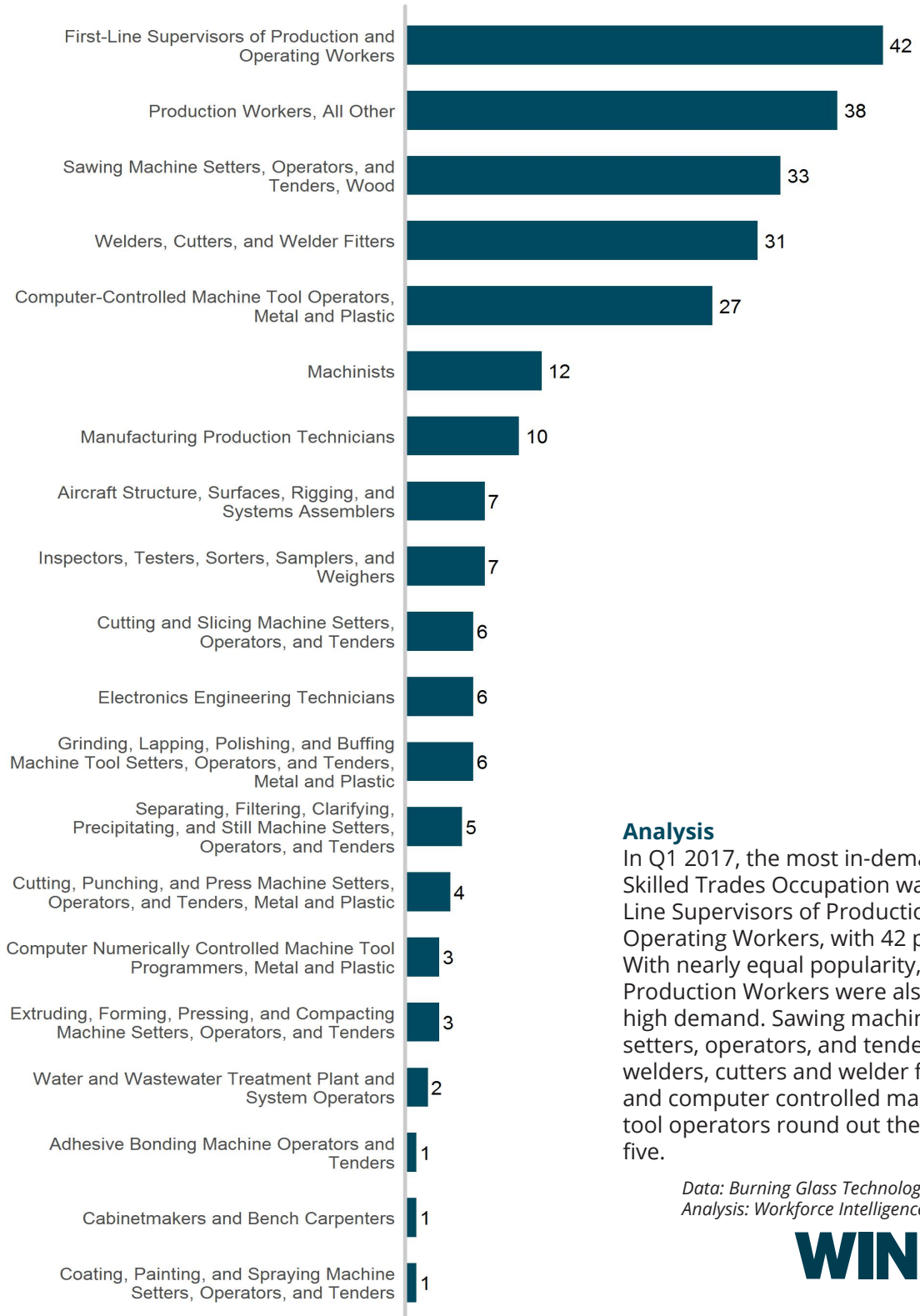


Education desired: High school diploma or vocational training

## Skilled Trades & Technicians

### Top Jobs

Quarter 1 2017



### Analysis

In Q1 2017, the most in-demand Skilled Trades Occupation was First-Line Supervisors of Production and Operating Workers, with 42 postings. With nearly equal popularity, Production Workers were also in high demand. Sawing machine setters, operators, and tenders, welders, cutters and welder fitters, and computer controlled machine tool operators round out the top five.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network







Entry-level availability:  
under 2 years required

4.5%

decrease in job postings

## Skilled Trades & Technicians Education and Experience

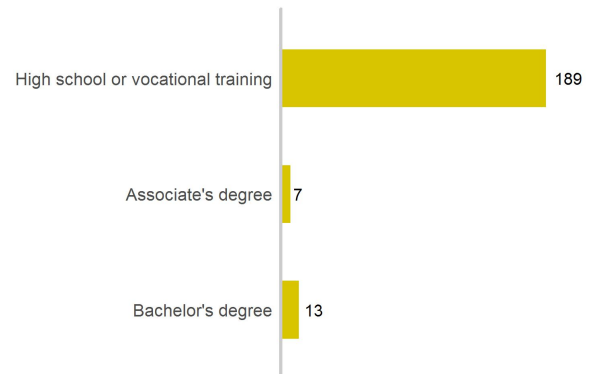
Desired experience levels vary greatly among skilled trades occupations. While fifty eight percent of postings that specified experience are available to those with fewer than two years of experience, another eleven percent would like very experienced workers with more than nine years.

Ninety percent of job postings required only a high school diploma or vocational training, with 189 postings. The low educational requirements in the Skilled Trades occupations make many positions accessible to entry-level workers willing to put time into on the job training and practice.

### In-Demand Areas of Study

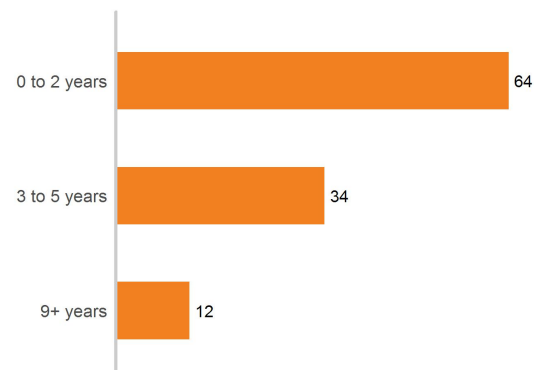
- Engineering
- Business administration and management
- Chemistry
- Electrical and electronic engineering technologies/technicians
- Chemical Engineering

### Educational Attainment



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Experience Required



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Desired knowledge: engineering,  
business administration

74%  
of ads for full-time  
employment

## Skilled Trades & Technicians In-Demand Skills

The occupations in the Skilled Trades mainly require manufacturing focused skills. The demand for technical positions in Skilled Trades job postings is demonstrated in the posting for skillsets like CNC and repair and inspection. Employers also focus on more general skills like physical ability, mathematics and effective communication.

### Technical In-Demand Skills

- Computer Numerical Control (CNC)
- Repair, Inspection
- Hand tools
- Machining
- Welding

### Foundational In-Demand Skills

- Ability to perform physical labor
- Mathematics
- Communication skills
- Writing
- Computer skills

### Job Type

- Temporary: 5.1%
- Full-time: 73.9%
- Part-time: 4.3%

### Certifications Required

- Commercial Driver's License (CDL)
- Certified Overhead Crane Operator
- Certified Control Systems Technician
- Electrician Certification
- Electronic Technician Certification



In-demand certifications: CDL,  
Overhead Crane Operator



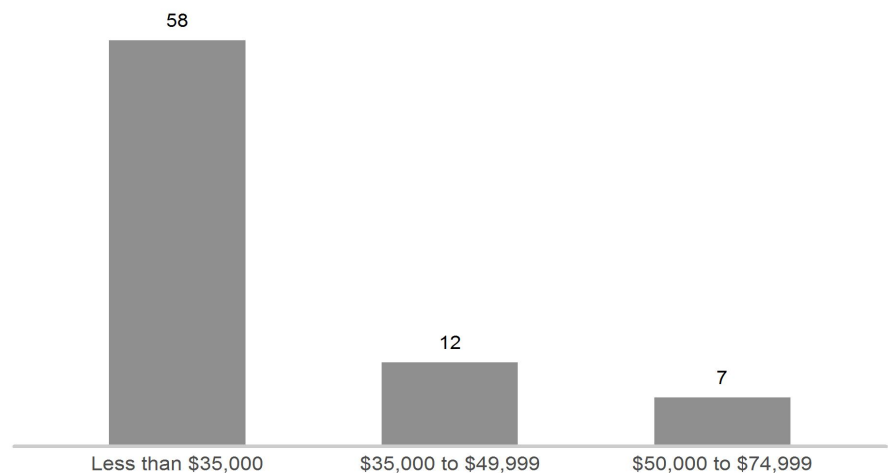
Average advertised salary:  
\$29,535

## Skilled Trades & Technicians Wages

Skilled Trades are some of the lowest paid occupations in Genesee and Shiawassee counties, and across southeast Michigan. Seventy-five percent of advertised salaries in the Skilled Trades in Q1 2017 were below \$35,000 per year. The median advertised salary was \$29,535 annually, although this may reflect the high number of entry-level jobs available. Nine of the top ten in-demand Skilled Trades jobs during Q1 2017 have median wages over \$15 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
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
51-7041	Sawing Machine Setters, Operators, and Tenders, Wood	\$11.21	\$12.70	\$15.33	\$18.88	\$21.08
51-4121	Welders, Cutters, and Welder Fitters	\$12.73	\$15.15	\$17.87	\$22.25	\$28.27
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$11.38	\$13.62	\$18.70	\$23.08	\$28.44
51-4041	Machinists	\$12.71	\$15.79	\$19.49	\$24.55	\$29.91
17-3029	Manufacturing Production Technicians	\$20.49	\$26.65	\$31.91	\$36.96	\$44.69
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	\$15.21	\$18.59	\$23.73	\$30.52	\$34.52
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.81	\$11.55	\$15.46	\$21.68	\$28.32
51-9032	Cutting and Slicing Machine Setters, Operators, and Tenders	\$9.92	\$11.03	\$13.63	\$16.90	\$20.26

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	222,897	216,445	214,357	217,648	217,053	214,711	216,753	<b>217,059</b>	306	0.1%
Employment	192,152	191,942	193,052	196,437	199,947	201,853	205,115	<b>204,251</b>	-865	-0.4%
Unemployment	30,746	24,504	21,305	21,211	17,105	12,857	11,638	<b>12,809</b>	1,171	10.1%
Unemployment Rate	13.8%	11.3%	9.9%	9.7%	7.9%	6.0%	5.4%	<b>5.9%</b>	0.5%	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	215,908	217,582	216,307	217,215	<b>217,059</b>	-156	-0.1%	1,152	0.5%
Employment	203,274	206,023	204,190	206,973	<b>204,067</b>	-2,906	-1.4%	793	0.4%
Unemployment	12,634	11,559	12,117	10,243	<b>12,993</b>	2,750	26.8%	359	2.8%
Unemployment Rate	5.9%	5.3%	5.6%	4.7%	<b>6.0%</b>	1.3%	na	0.1%	na

*\*Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics












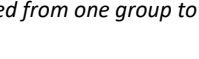
### Monthly Labor Market Data

	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	214,348	216,232	217,143	215,793	217,910	219,043	217,618	216,397	214,906	217,449	217,843	216,354	217,117	218,015	216,046
Employment	201,815	203,726	204,281	204,545	206,612	206,913	203,545	204,759	204,267	206,796	208,351	205,771	203,699	204,077	204,424
Unemployment	12,533	12,506	12,862	11,248	11,298	12,130	14,073	11,638	10,639	10,653	9,492	10,583	13,418	13,938	11,622
Unemployment Rate	5.8%	5.8%	5.9%	5.2%	5.2%	5.5%	6.5%	5.4%	5.0%	4.9%	4.4%	4.9%	6.2%	6.4%	5.4%

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

Data: Bureau of Labor Statistics

# Genesee & Shiawassee Counties 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	5,711	5,631	6,667	6,261	7,102		24.4%	26.1%
Agriculture	75	94	86	82	66		-12.0%	-29.8%
Business & finance	242	185	171	255	259		7.0%	40.0%
Construction	64	87	89	45	88		37.5%	1.1%
Customer service	1,458	1,417	1,698	1,575	1,756		20.4%	23.9%
Education	205	207	257	212	242		18.0%	16.9%
Energy	44	49	0	1	6		-86.4%	-87.8%
Engineers & designers	149	123	99	109	104		-30.2%	-15.4%
Health care	925	976	1,197	1,203	1,589		71.8%	62.8%
Information technology	168	208	223	174	189		12.5%	-9.1%
Skilled trades & technicians	247	167	201	265	253		2.4%	51.5%
Transportation, distribution, and logistics	607	732	930	503	488		-19.6%	-33.3%

*\*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.*

Website

**[www.WINintelligence.org](http://www.WINintelligence.org)**

Email

**[info@win-semich.org](mailto:info@win-semich.org)**

Phone

**313.744.2946**

Address

**440 E. Congress St., 4th Floor  
Detroit, MI 48226**

Facebook

**[@workforceintelligencenetwork](https://www.facebook.com/workforceintelligencenetwork)**

Twitter

**[@win-semich](https://twitter.com/win-semich)**