

Q1 2017

January - March

# WASHTENAW COUNTY

## WIN Labor Market Report





# Introduction: Washtenaw 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 Region # as a whole with special sections devoted to 8 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 (IT) (page 21)
- Skilled Trades and Technicians, Manufacturing Focused (page 26)

Data analyzed includes:

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



# Introduction: Washtenaw County

## 2016 Year in Review

Overall job postings were generally stable in Washtenaw County throughout 2016. An eight percent demand decrease between Q1 and Q2 was followed by several quarters of slow growth and a dramatic 17 percent increase coming into Q1 2017. Since Q1 2016, Washtenaw County gained about 1,000 online job postings, an eight percent increase in total. Specific occupation groups varied greatly in demand. Business and Finance advertisements followed a similar pattern to overall postings, although increases during late 2016 and Q1 2017 did not overcome the 91 posting decrease into Q2 2016. The occupation group experienced a 3.6 percent loss between Q1 2016 and Q1 2017. Engineers and Designers declined in demand by 9.2 percent throughout 2016, moving from 512 postings in Q1 2016 to 465 in Q1 2017. Each quarter in 2016 saw a lower level of postings, but demand rebounded slightly into Q1 2017. Conversely, Health Care job postings have increased every quarter since Q2 2016, experiencing a 44 percent growth in demand from 1,696 postings in Q1 2016 to 2,444 in Q1 2017. Employer demand for Information technology jobs fell to a low of 1,207 in Q3 2016, but has since returned to 1,530 postings. Overall, this is a 4.7 percent loss in demand between Q1 2016 and Q1 2017. Skilled trades occupations began 2016 with 387 online job ads, but dropped 100 postings into Q2. Job postings increased during each subsequent quarter, but the Q1 2017 level of 338 ads represented a 12.7 percent loss in demand over the year.

The labor force in Washtenaw County increased 1.1 percent over the course of 2016, gaining 2,101 individuals for a total of 193,961. This increase mainly occurred between Q3 and Q4 2016, as the first three quarters of 2016 were stable and the labor force levels declined slightly into Q1 2017. Employment followed a similar pattern through 2016, with unremarkable performance in early 2016 followed by a jump into Q4 for an overall 1.8 percent increase. Due to this large increase in employment and moderate labor market performance, the annual unemployment rate decreased by .6 percentage points for a historic low of 2.8 percent.

## Key Findings for Q1 2017

### **Washtenaw County job demand reaches all-time highs.**

Over the past 5 years, employer demand has trended upward. Postings have increased 14 percent between the 11,020 ads in Q1 2016 to 12,912 in Q1 2017. In the past 3 years, postings stabilized around 11,000 postings. However, for the first-time job postings have shattered the 12,000 postings ceiling, nearing 13,000 job postings.

### **Top jobs present lucrative opportunities in Washtenaw County.**

The three top in-demand jobs of Washtenaw County all reflect high potential earnings. Bureau of Labor Statistics reports that Registered Nurses, the highest in-demand occupation in Washtenaw county earn a median annual salary of \$60,784, while software developers (the third most in-demand job) make a median salary of \$76,000. With these jobs in high demand, they present great opportunities for job seekers.

### **High demand for workers with less than 5 years of experience.**

All the occupation groups analyzed within this report all showed demand for workers with less than 5 years of experience. While the Business and Finance, Information Technology, and Engineers and Designers groups sought mainly applicants with 3 to 5 years of experience, entry level postings are available in these groups. Health Care and Skilled Trades employers desired those with zero to two years' experience or entry level workers.

### **Labor market witnesses smallest quarterly drop since first quarter of 2016.**

During the recent quarter labor force participation fell by 0.4 percent to 193,961 individuals. Employment figures in Washtenaw county also fell by 0.6 percent, a loss of 1,109 employees. With employment falling further than the labor force, unemployment increased by about 0.2 percent since Q4 2016 to 3.3% in Q1.

### **Demand for Health Care workers reaches new peak, climbing 44 percent annually.**

Demand for Health Care related occupations has steadily increased after a drop during the second half of 2013. Recently there have been 2,444 job postings for this occupation group, the highest amount of online advertisements within a 6-year span. Demand could strengthen even more if this trend continues through (See page 16 for details).

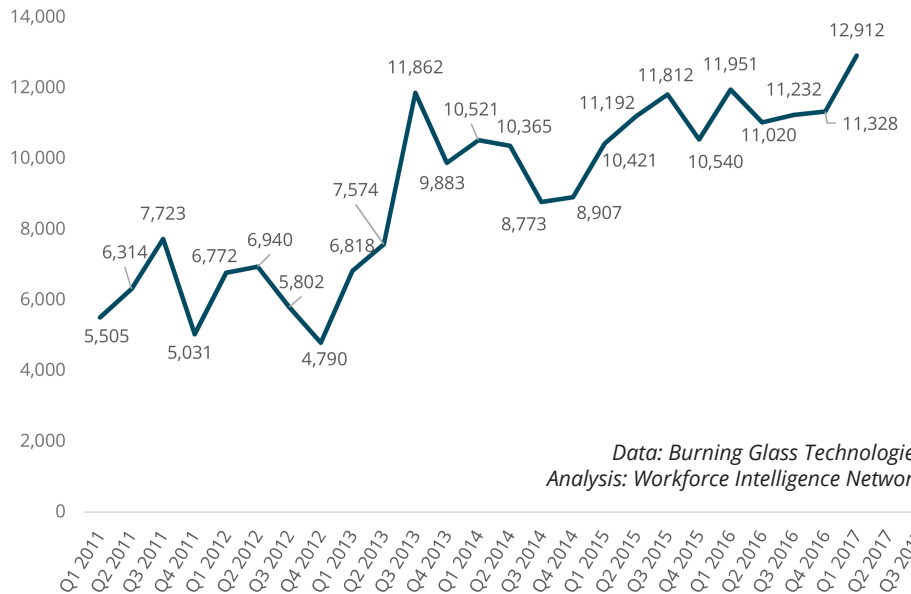


# Workforce and Employer Demand Indicators

## Postings over time

Total online job postings by employers in Washtenaw during Q1 2017 rose 14 percent, from 11,328 in Q4 2016 to 12,912. Employer demand fluctuates quarter to quarter and the overall trend for demand in Washtenaw County is upward.

## WIN Region Online Job Postings

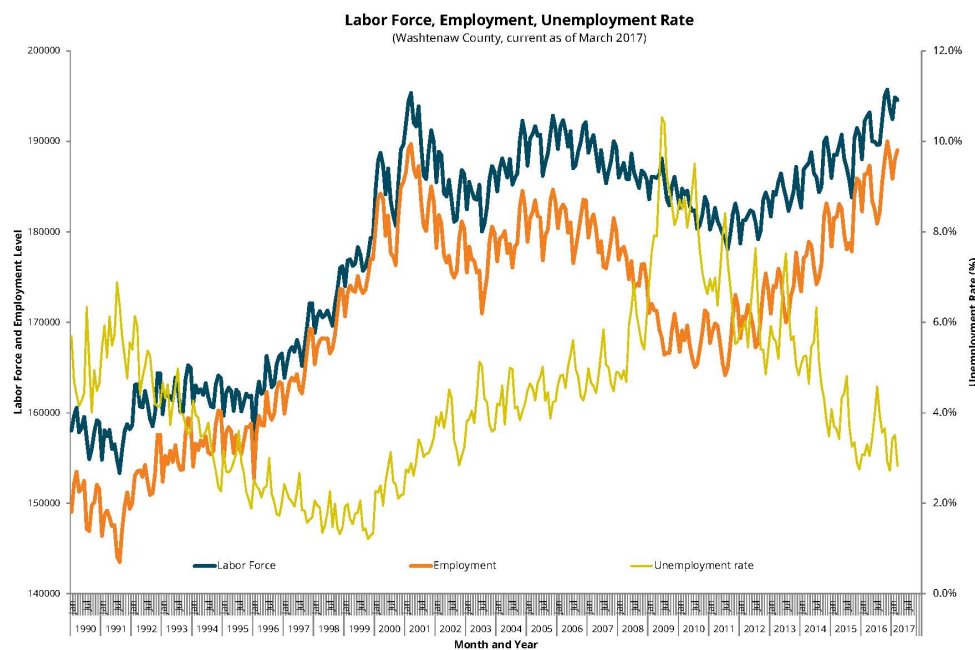


## Labor force/employment/unemployment

The Washtenaw County labor force fell by 828 workers from Q4 2016 to Q1 2017, a 0.4 percent decrease to 193,961 workers in the market. Employment fell at a similar rate, 0.6 percent, between quarters to 182,752 employees, boosting the quarterly unemployment rate 0.2 percentage points to 3.3 percent. Employment in Washtenaw County annually has grown 5 percent since 2015. The unemployment rate in Washtenaw County has dropped every year since it stood at 8.1 percent in 2010 and the economy has added over 22,000 jobs during the same time period.

## Labor Force, Employment, Unemployment Rate

Q1 2017



Data: BLS  
Analysis: Workforce Intelligence Network





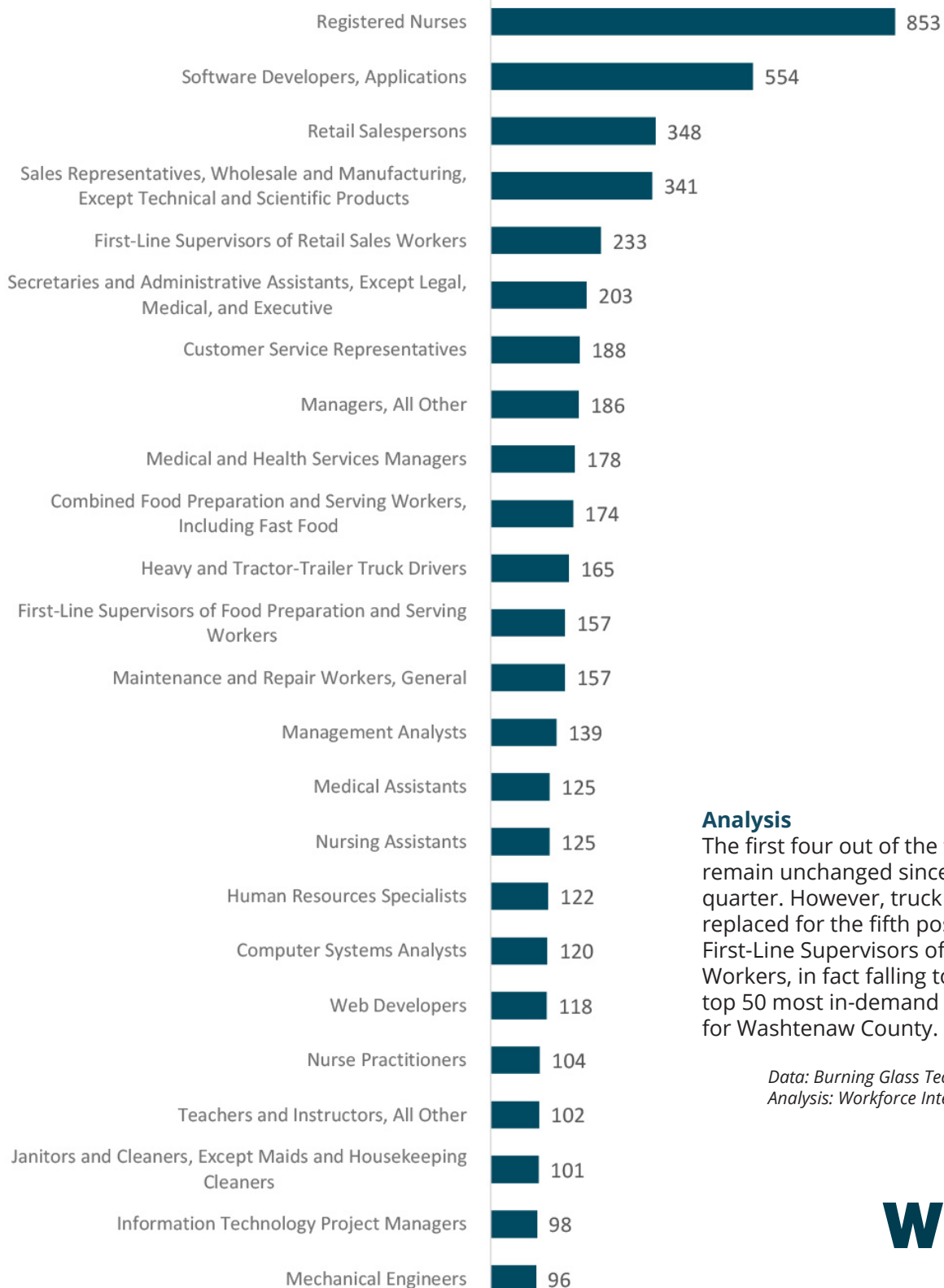


Now hiring: Nearly 13,000 job postings

1.4%  
annual growth in  
employment

### Top Jobs

Q1 2017



### Analysis

The first four out of the top five jobs remain unchanged since last quarter. However, truck drivers were replaced for the fifth position with by First-Line Supervisors of Retail Sales Workers, in fact falling to 11th in the top 50 most in-demand occupations for Washtenaw County.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



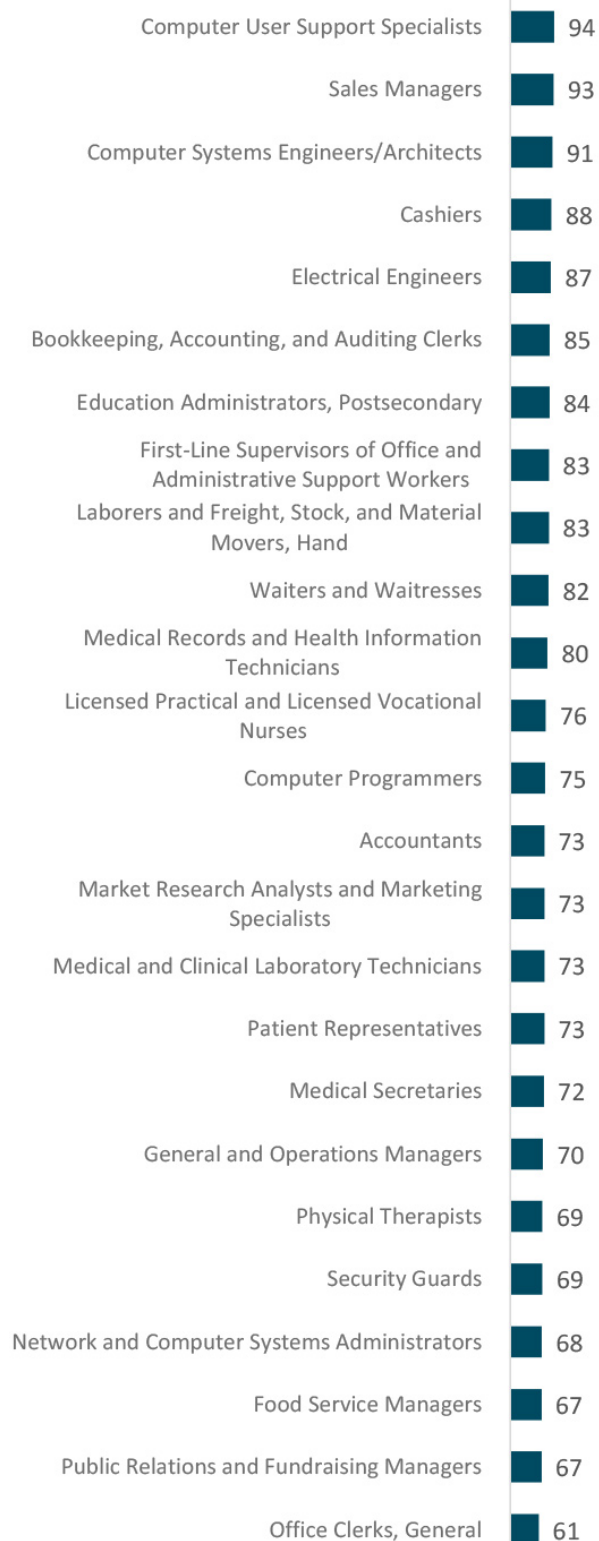
Most in-demand: registered nurses, software developers

3.3%

quarterly unemployment rate

### Top Jobs

Q1 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.

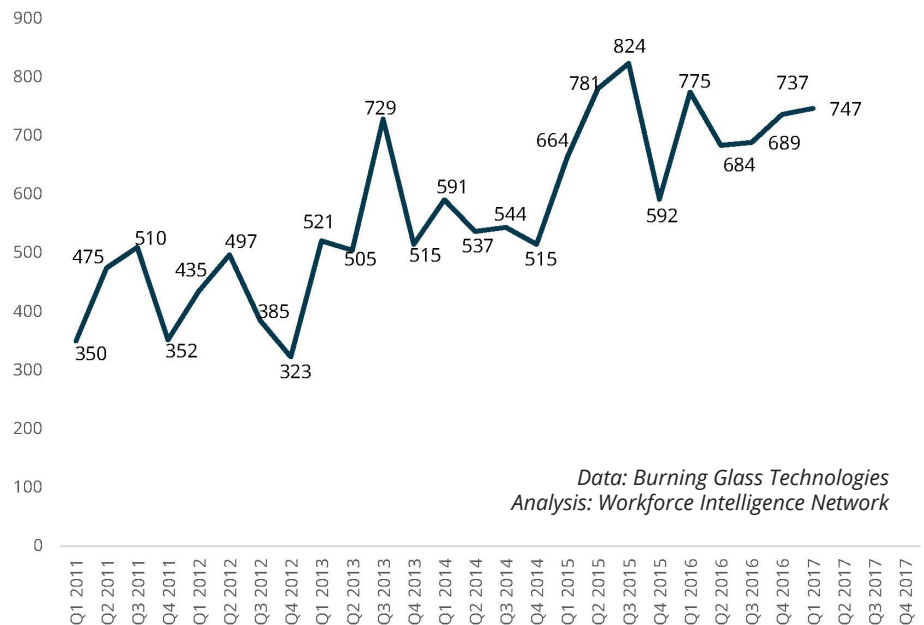
## Job Posting Analysis

Washtenaw County employers posted 747 online job ads for Business Finance occupations during Q1 2017. This is a slight 1.4 percent increase from the 737 job ads posted for these types of workers during Q4 2016. Employer demand for Business & Finance occupations continues trending upward, quarter-to-quarter. Increased demand is correlating with growth in employment for these occupations in Washtenaw County.

## Employment Analysis

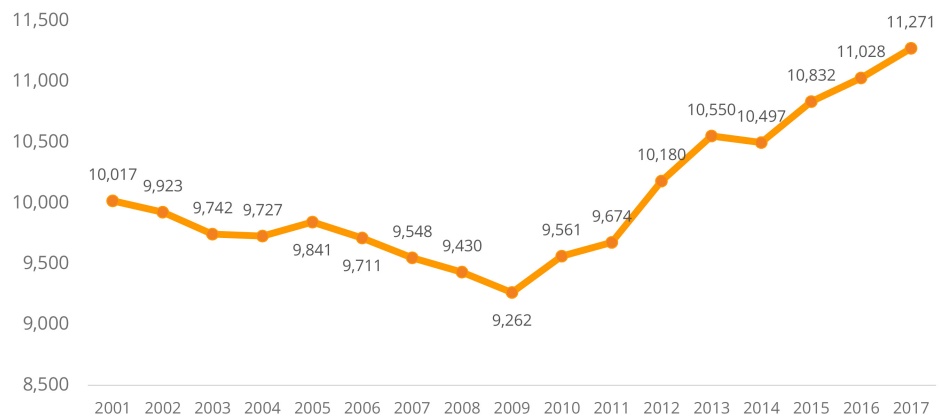
Due to the overall increase in demand for Business and Finance workers in Washtenaw County, employment has risen for this set of occupations. As of 2017, 11,271 Washtenaw County workers have employment in Business and Finance related occupations. Employment has sustained consistent growth since 2014, adding nearly 800 jobs (8 percent). This occupation group has added 2,000 new jobs since the end of the recession in 2009.

## Online Job Postings



## Employment Over Time

Q1 2017



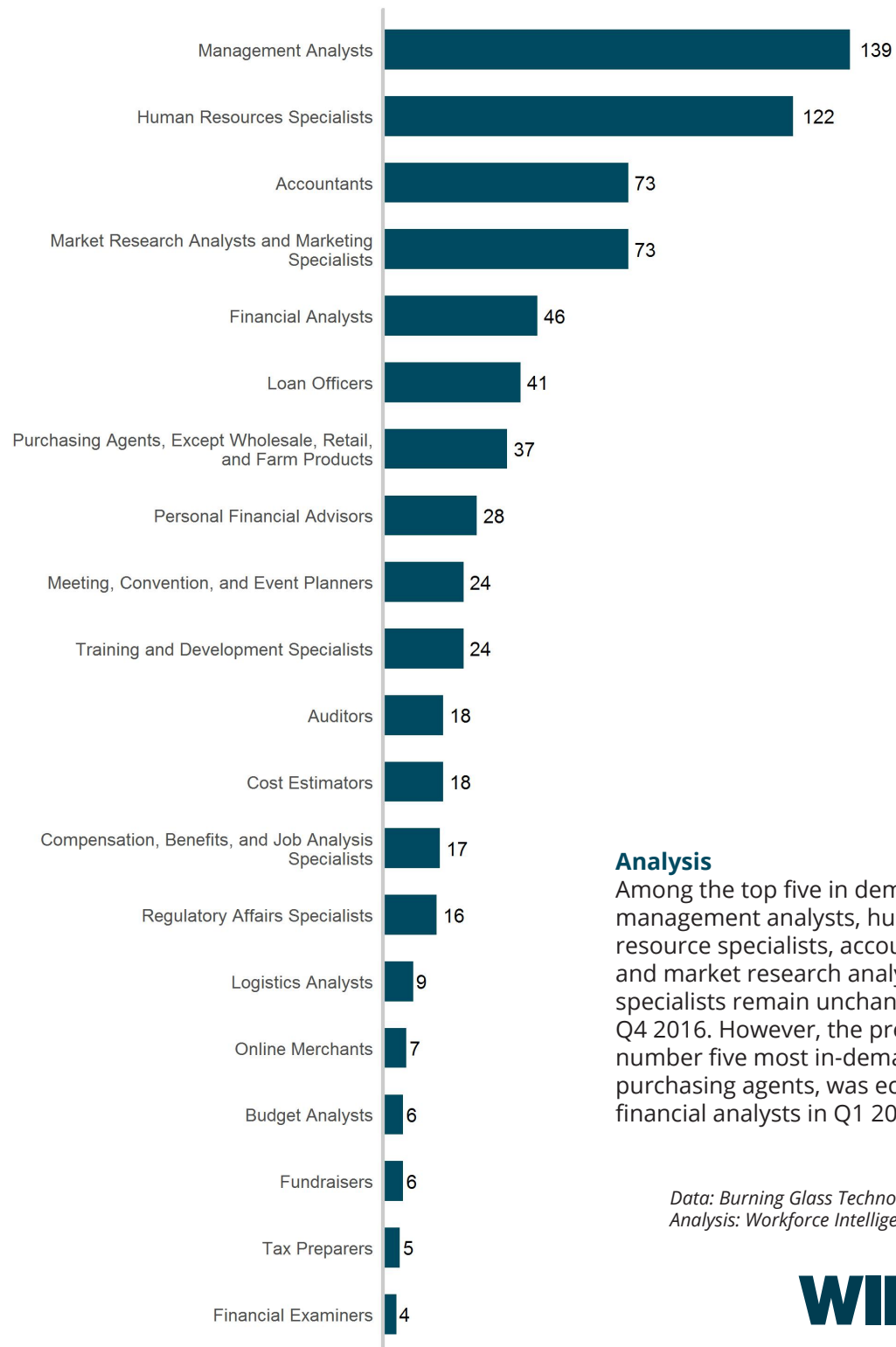


11,271 Business & Finance  
employees



Now hiring: 747 Business &  
Finance job postings

**Business & Finance**  
**Top Jobs**  
Q1 2017



**Analysis**

Among the top five in demand jobs: management analysts, human resource specialists, accountants, and market research analysts and specialists remain unchanged since Q4 2016. However, the previous number five most in-demand job, purchasing agents, was eclipsed by financial analysts in Q1 2017.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



In-demand skills: Computer skills,  
Accounting, Budgeting

68%

of Business & Finance ads  
offer full-time work

### Business & Finance Educational Attainment Required

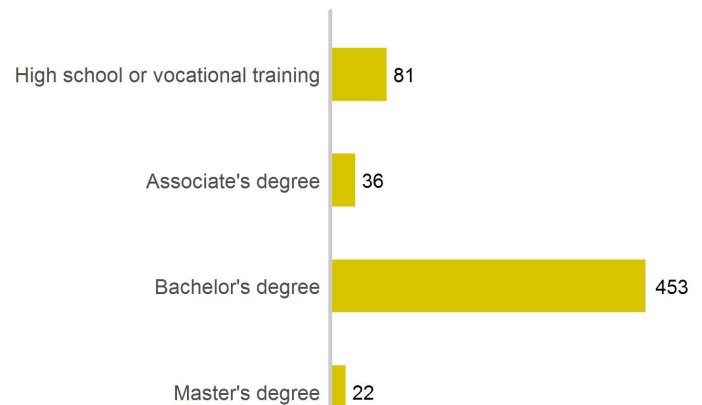
Seventy-nine percent (592 postings) of Q1 Business and Finance job postings specified a desired level of educational attainment. Of those, the majority (453 postings) required job candidates to hold a bachelor's degree. A smaller share of job postings (81 postings) targeted jobseekers with just a high school diploma.

Most Business and Finance job postings (455 postings) in Washtenaw County desired jobseekers with fewer than five years of experience which has grown since 2016. Among job postings that specified experience criteria, 40 percent (174 postings) were available to entry level workers with 0 to 2 years of experience.

### In-Demand Areas of Study

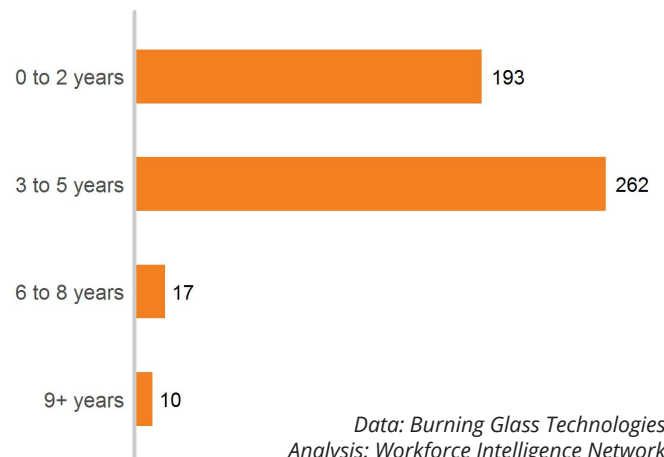
- Business Administration and Management
- Accounting
- Finance, General
- Human Resources Development
- Computer Science

### Educational Attainment



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Experience Required



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Mean advertised salary:  
\$56,460



Knowledge areas:  
Accounting, Finance

### Business & Finance In-Demand Skills

Basic employability skills important to Business & Finance occupations in Washtenaw County include communication skills, writing, and basic computer skills. Washtenaw County employers also sought more technical skills in accounting and budgeting, and experience in customer service and project management in Q1 Business & Finance job postings.

#### Technical In-Demand Skills

- Microsoft Office
- Accounting/Budgeting
- Scheduling
- Project Management
- Customer Service

#### Foundational In-Demand Skills

- Communication skills
- Writing
- Detail-Oriented
- Organizational skills/ Planning
- Research

#### Job Type

- Temporary: 6.7%
- Full-Time: 67.5%
- Part-Time: 1.9%

#### Certifications Required

- Certified Public Accountant (CPA)
- Series 7
- Project Management Certification (E.G. PMP)
- Investment Advisor
- Professional in Human Resources



In-demand certifications:  
CPA, Series 7



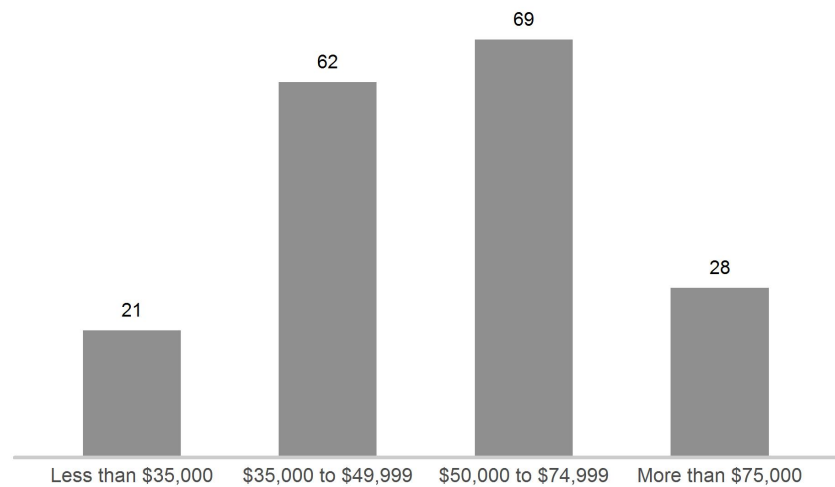
Education required:  
Bachelor's Degree

## Business & Finance Wages

Business and Finance occupations offer Washtenaw County workers a wide range of salaries. Only 159 of the 747 Business and Finance postings in the county during Q1 2017 specified a wage or salary range – the distribution of those earnings are visible in the chart to the right. Wage data from the Bureau of Labor Statistics show that eight out of the top ten in-demand Business & Finance jobs in the county make at least \$24 an hour at the median, or over \$50,000 a year.

## Advertised Wages in Job Postings

Q1 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	Data Not Available	\$21.42	\$27.91	\$35.97	\$46.11
13-2011	Accountants	\$19.32	\$23.86	\$31.72	\$42.09	\$54.49
13-1161	Market Research Analysts and Marketing Specialists	\$18.52	\$23.66	\$32.02	\$42.59	\$52.77
13-2051	Financial Analysts	\$23.91	\$29.53	\$38.05	\$46.71	\$56.41
13-2072	Loan Officers	\$13.34	\$18.11	\$23.63	\$32.62	\$49.76
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	\$20.12	\$25.13	\$33.08	\$42.72	\$52.93
13-2052	Personal Financial Advisors	\$20.28	\$26.19	\$33.25	\$57.74	\$79.47
13-1121	Meeting, Convention, and Event Planners	\$12.97	\$16.74	\$21.07	\$26.97	\$33.18
13-1151	Training and Development Specialists	\$13.98	\$18.67	\$25.22	\$34.91	\$44.20

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.

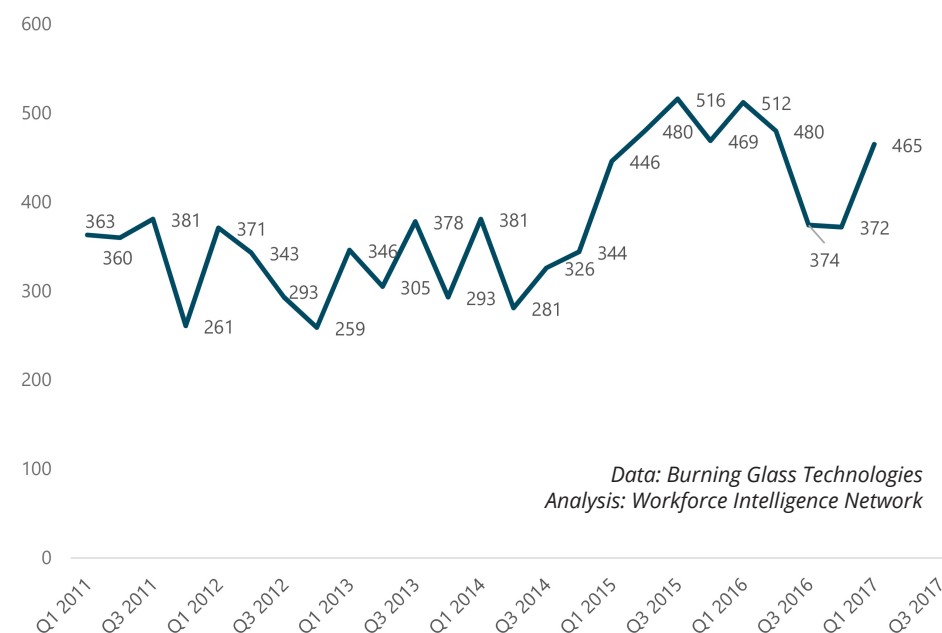
## Job Posting Analysis

Washtenaw County employers posted 465 online job ads for advanced manufacturing-focused Engineers & Designers during Q1 2017. This is the first quarter of increased postings since Q1 2016, although demand is still lower than that quarter's 512 posting peak by approximately 3 percent or 15 postings. During 2015 postings jumped from the low 300s to the high 400s, but has recently been hovering around an average in the mid 400s.

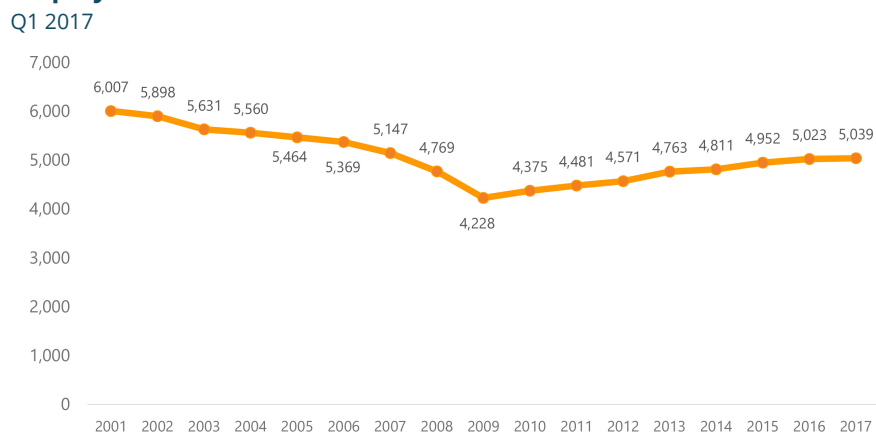
## Employment Analysis

Employment in Washtenaw County's Engineering & Design occupations has been growing slowly and steadily each year since 2009. In 2017, 5,039 Washtenaw County workers are employees in these occupations, about 800 more than in 2009.

## Online Job Postings



## Employment Over Time



Data: EMSI  
Analysis: Workforce Intelligence Network



Now hiring: 465 Engineering & Design job postings

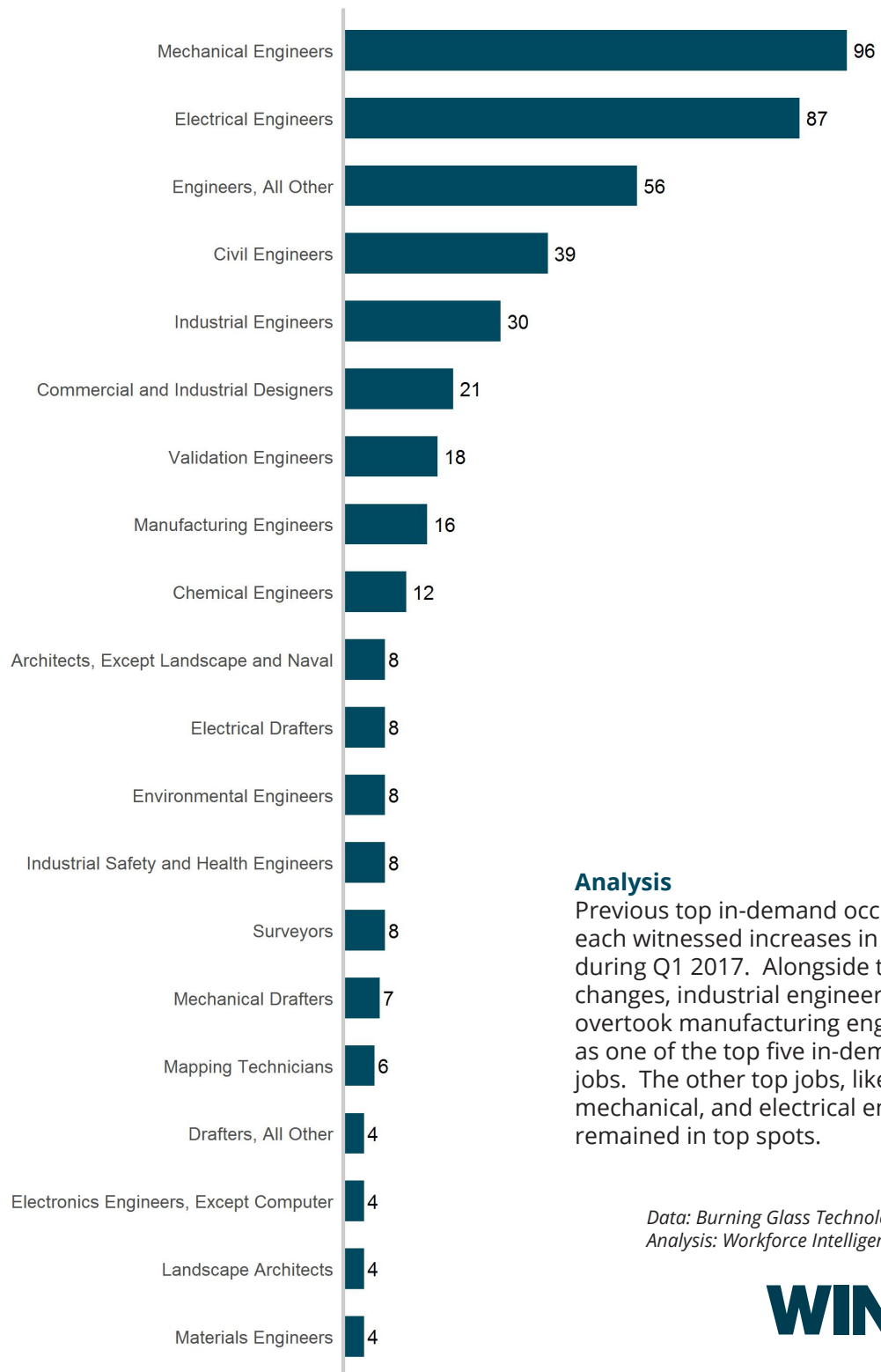


5,039 Engineering & Design employees

## Engineers & Designers

### Top Jobs

Q1 2017



### Analysis

Previous top in-demand occupations each witnessed increases in postings during Q1 2017. Alongside these changes, industrial engineers overtook manufacturing engineers as one of the top five in-demand jobs. The other top jobs, like mechanical, and electrical engineers remained in top spots.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Education required:  
Bachelor's Degree

64%

of Engineers & Designers ads  
offer full-time work

### Engineers & Designers Educational Attainment Required

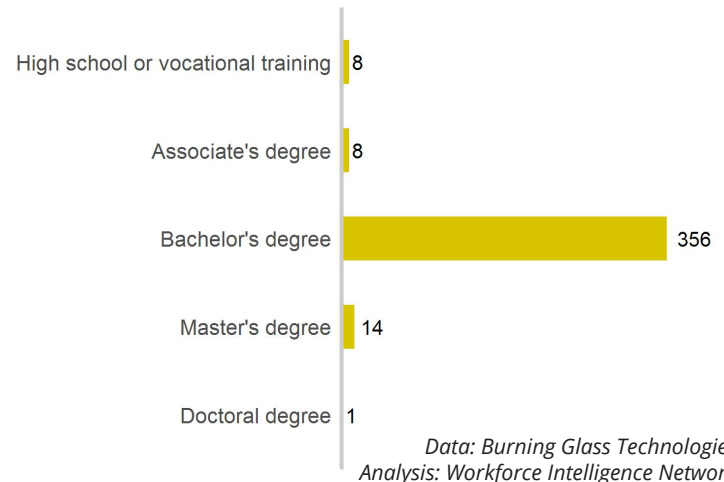
Employers in Engineering and Design occupations most frequently expect job candidates to hold bachelor's degrees. Job postings data from Q1 2017 show that 356 ads for Washtenaw County jobs required candidates to have a bachelor's degree. Some Engineering and Design jobs, like drafters, are available to jobseekers with an associate's degree.

Most Engineering and Design job postings in Washtenaw County during Q1 2017 targeted workers with less than 5 years of experience, with 84 postings seeking entry level applicants with 0 to 2 years of experience.

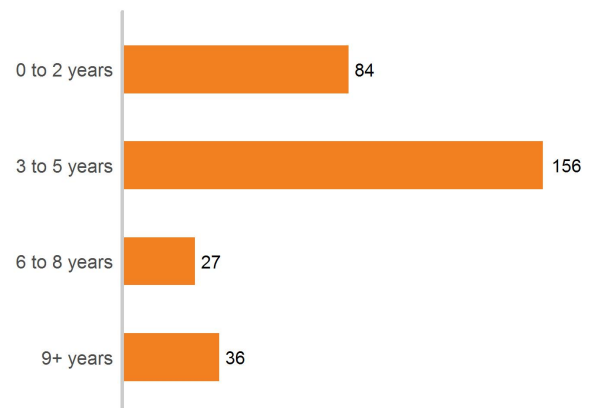
### In-Demand Areas of Study

- Engineering
- Mechanical Engineering
- Electrical and Electronic Engineering Technicians
- Computer Science
- Business Administration and Management, General

### Educational Attainment



### Experience Required





Knowledge areas: Mechanical  
and Electrical Engineering



Mean advertised salary:  
\$76,793

### Engineers & Designers In-Demand Skills

Washtenaw County employers looking to hire workers for Engineering and Design occupations specified basic skills like communication, writing and research, and computer skills as prerequisites for employment in Q1 2017 job postings. Employers are also looking for more technical skills from engineers and designers like AutoCAD, experience with project management, and skill in electrical and mechanical engineering.

#### Technical In-Demand Skills

- Microsoft Office
- Budgeting
- Electrical Engineering
- Project Management
- Mechanical Engineering

#### Foundational In-Demand Skills

- Communication skills
- Writing and research
- Problem solving, troubleshooting
- Planning
- Mathematics

#### Job Type

- Temporary: 6.2%
- Full-Time: 64.1%
- Part-Time: Data Not Available

#### Certifications Required

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



In-demand skills: AutoCAD,  
writing and research



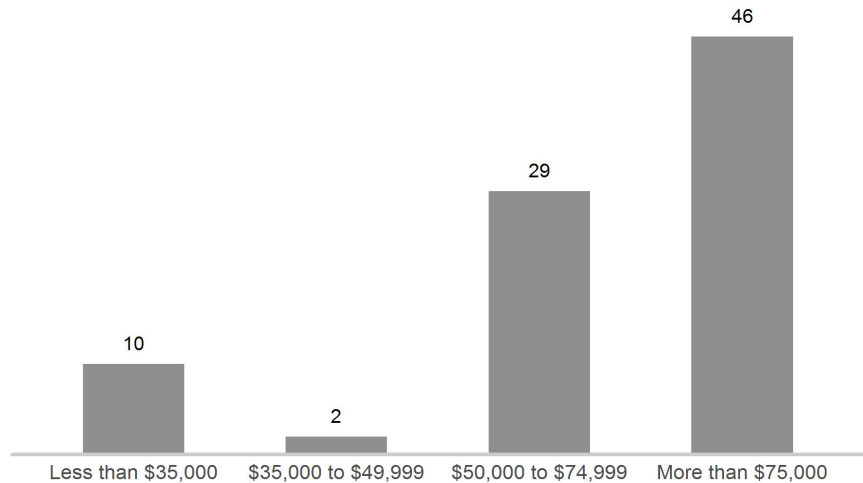
In-demand certifications:  
ABET, NIST

## Engineers & Designers Wages

Advanced manufacturing Engineering and Design occupations are some of the highest paying in Washtenaw County and throughout southeast Michigan. Seventy Q1 2017 job postings specified a wage or salary range, and of those that did, 48 advertised annual earnings over \$75,000. Ten of the top ten in-demand Engineering & Design jobs earn over \$30 per hour at the median, or over \$62,000 a year, according to wage data from the Bureau of Labor Statistics.

## Advertised Wages in Job Postings

Q1 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	Data Not Available	\$34.90	\$42.69	\$50.55	\$60.05
17-2199	Engineers, All Other	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
17-2051	Civil Engineers	\$24.61	\$29.18	\$34.59	\$40.59	\$48.81
17-2112	Industrial Engineers	\$30.15	\$36.92	\$43.89	\$52.36	\$59.16
27-1021	Commercial and Industrial Designers	\$26.26	\$32.64	\$39.12	\$44.93	\$50.70
17-2199	Validation Engineers	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
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
17-1011	Architects, Except Landscape and Naval	\$21.62	\$27.10	\$33.27	\$41.33	\$49.67

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.

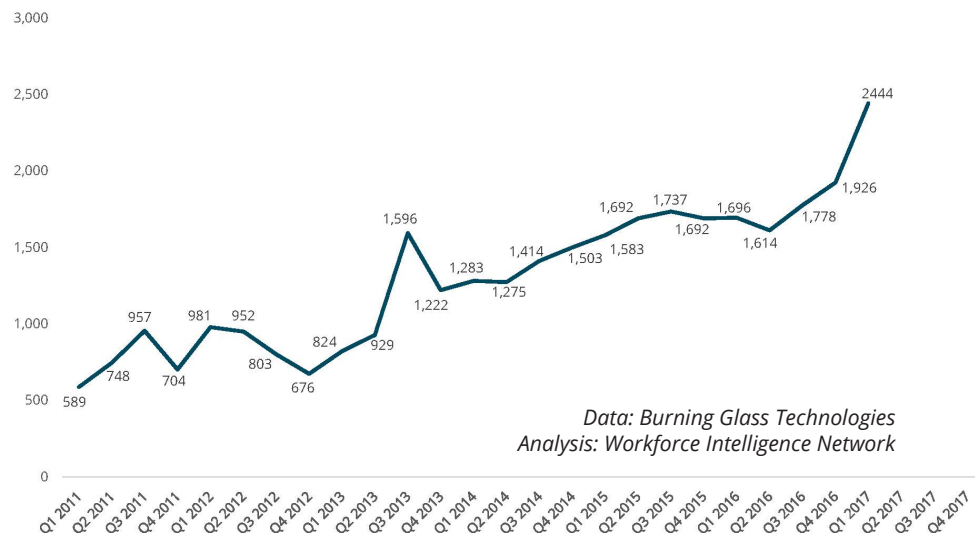
## Job Posting Analysis

Employer demand for Health Care occupations has trended upward in Washtenaw County over a 5-year span. Postings for these occupations seem to have reached a steady level of job demand since 2014. Recently, online job advertisements reached their highest level of quarterly postings with 2,444 ads for health care related jobs in Q1 2017. This is the third consecutive quarterly high for this group, for an overall 44 percent increase from the 1,696 postings in Q1 2016.

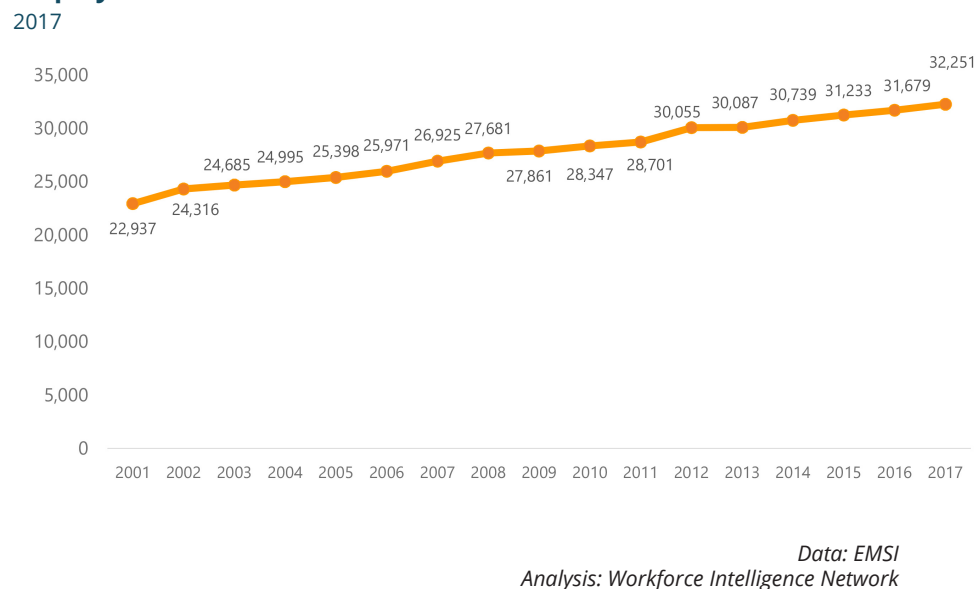
## Employment Analysis

In 2017, 32,251 Washtenaw County workers are employed in Health Care occupations. Health Care employment was largely unaffected by the Great Recession and this occupation group consistently adds a few hundred jobs each year.

## Online Job Postings



## Employment Over Time



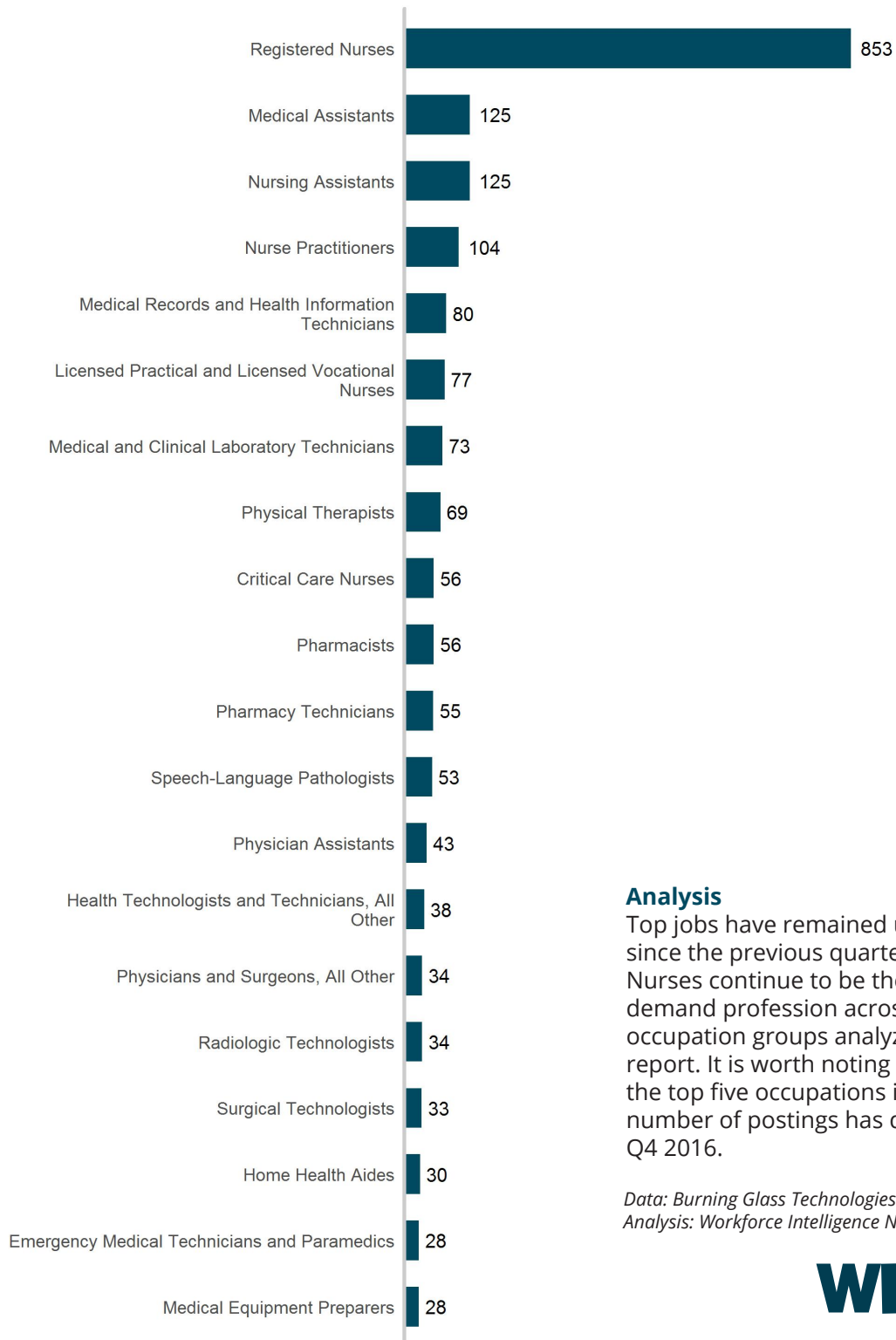
69%

of ads offer full-time positions



32,251 Health Care employees

### Health Care Top Jobs Q1 2017



#### Analysis

Top jobs have remained unchanged since the previous quarter. Registered Nurses continue to be the most in demand profession across all five occupation groups analyzed in this report. It is worth noting that for each of the top five occupations in this list, the number of postings has decreased since Q4 2016.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network





Over 2,400 online job postings



In-demand Skills: Patient Care, Scheduling, Communication

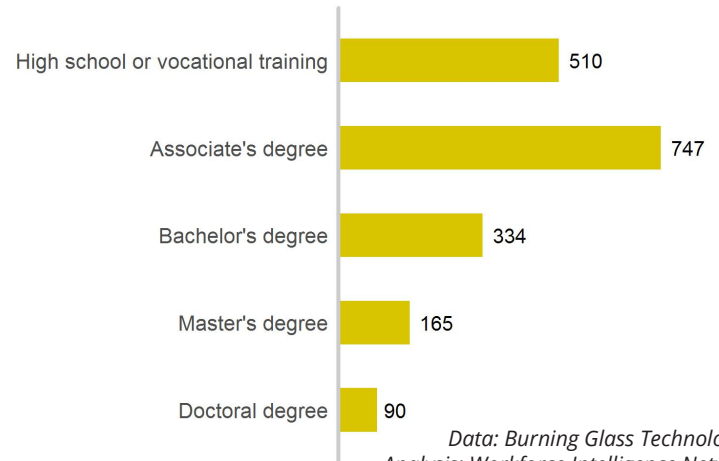
## Health Care Educational Attainment Required

Because occupations like Registered Nurses and Medical Assistants are some of the most in-demand Health Care jobs in Washtenaw County, many Q1 job postings required a high school diploma. Many employers prefer nurses holding associate degrees (853 postings) and high demand occupations like Nurse Practitioners, Speech-Language Pathologists, and Physician Assistants require higher educational attainment (334 postings for workers with bachelor degrees). Most (875 postings) Health Care positions open in Washtenaw County during Q1 were targeting workers with entry level experience of 0 to 2 years.

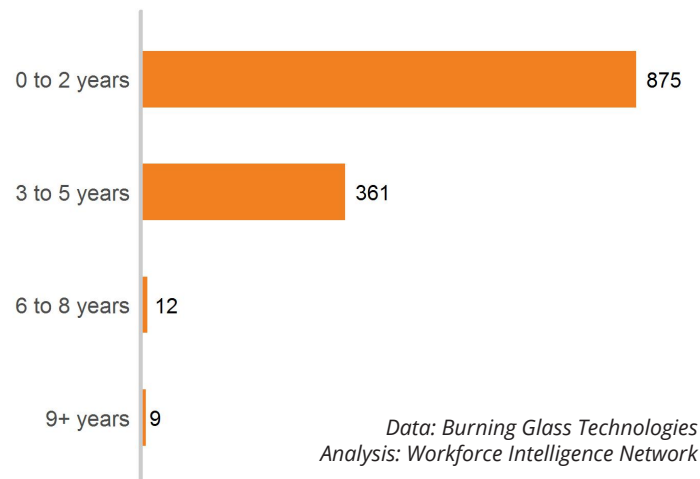
## In-Demand Areas of Study

- Nursing Science
- Physical Therapy/Therapist
- Medicine
- Business Administration and Management
- Radiologic Technology/Science - Radiographer

## Educational Attainment



## Experience Required





Education required: Associate's Degree or Bachelor's Degree



Knowledge areas: Nursing, Public Health, Medicine

### Health Care In-Demand Skills

Washtenaw County employers looking to hire Health Care workers in Q1 2017 sought basic skills like communication, teamwork, and writing and research as prerequisites for employment. Some of the more technical skills in-demand in Q1 job postings included treatment planning, patient care, and scheduling. Some in-demand health care occupations in Washtenaw during Q1 required knowledge of or experience in collective bargaining.

#### Technical In-Demand Skills

- Patient care, direction, and instruction
- Scheduling
- Treatment planning
- Advanced Cardiac Life Support (ACLS)
- Collective bargaining

#### Foundational In-Demand Skills

- Communication skills
- Teamwork/collaboration
- Writing and research
- Problem solving
- Organizational skills

#### Job Type

- Temporary: 11.2%
- Full-Time: 68.6%
- Part-Time: 10.1%

#### Certifications Required

- Registered Nurse
- Nurse Practitioner
- Advanced Cardiac Life Support (ACLS) Certification
- Security Clearance
- First Aid CPR AED



In-demand certifications:  
RN, ACLS, CPR



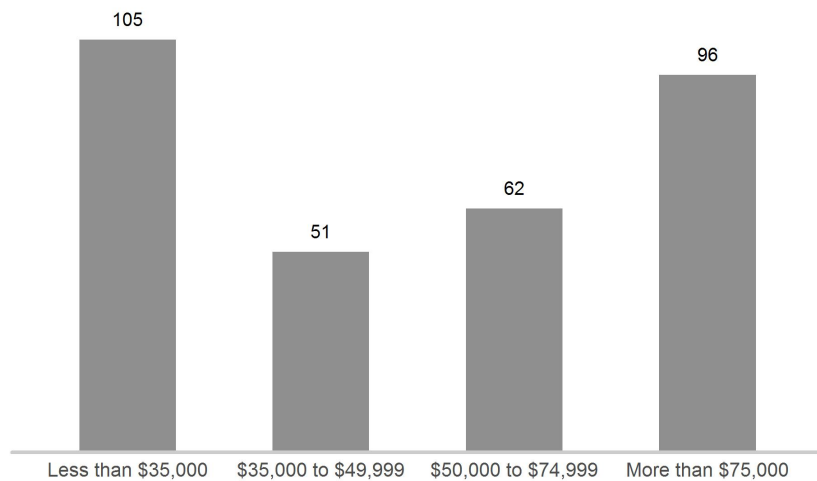
\$60,000: average  
advertised salary

## Health Care Wages

Only 314 of the 2,444 Health Care job postings for Q1 advertised salary information. The distribution of those wages is diffuse across each salary bracket, visible in the chart to the right. Data from the Bureau of Labor Statistics show that a job in Health Care, such as a Registered Nurse, can pay \$33 per hour at the median, over \$60,784 annually, for a position that typically requires only a two-year degree. The highest paid of the in-demand occupations are jobs that require higher educational attainment like physicians and surgeons.

## Advertised Wages in Job Postings

Q1 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
31-9092	Medical Assistants	\$10.78	\$12.34	\$14.06	\$16.32	\$18.78
31-1014	Nursing Assistants	\$9.96	\$11.65	\$13.46	\$15.52	\$17.56
29-1171	Nurse Practitioners	\$34.95	\$40.57	\$45.46	\$52.12	\$59.70
29-2071	Medical Records and Health Information Technicians	\$11.74	\$14.25	\$17.98	\$22.66	\$27.43
29-2061	Licensed Practical and Licensed Vocational Nurses	\$18.51	\$20.51	\$23.28	\$26.23	\$28.45
29-2012	Medical and Clinical Laboratory Technicians	\$10.79	\$12.75	\$15.28	\$19.12	\$27.00
29-1123	Physical Therapists	\$27.34	\$33.06	\$39.92	\$49.33	\$62.25
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

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.

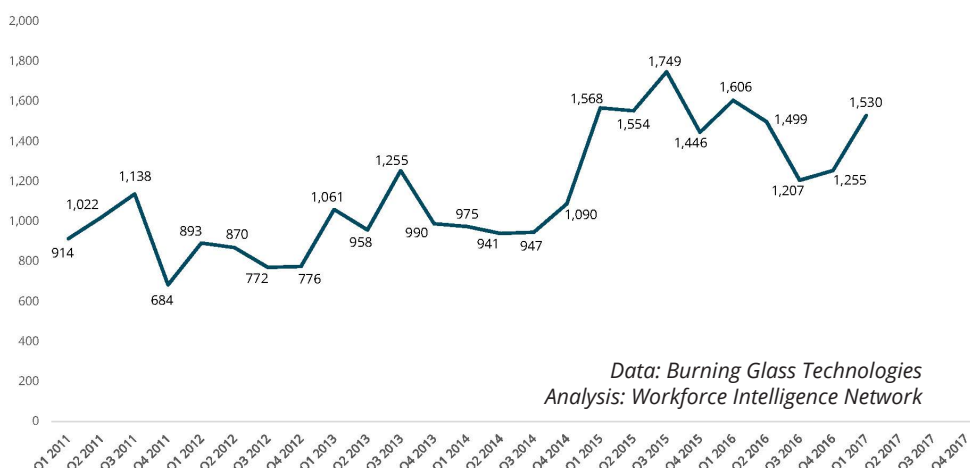
## Job Posting Analysis

Moving into Q1 2017, IT online job postings witnessed two consecutive quarters of growth. However, due to decreases earlier in 2016, postings are still five percent below the 1,606 online advertisements in Q1 2016. From a minimum level of 1,207 postings in Q3 2016, demand grew four percent to 1,255 ads in Q4 2016 followed by a 22 percent increase to Q1 2017 for a total of 1530 postings.

## Employment Analysis

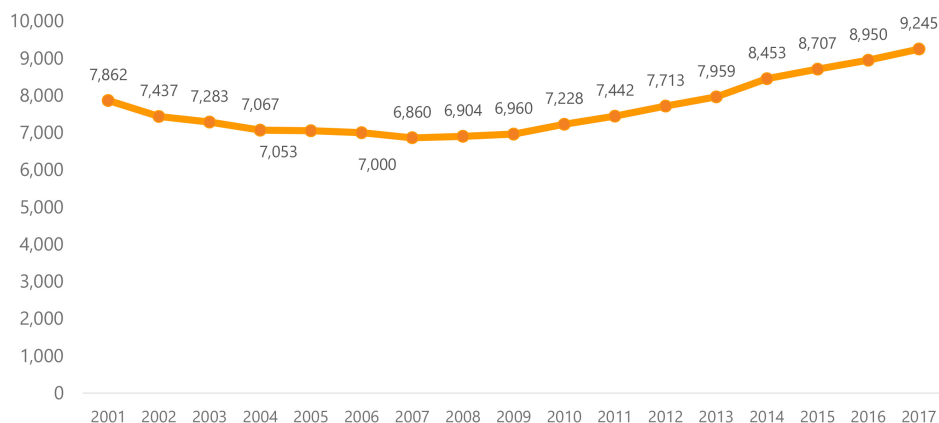
Consistently strong employer demand in Information Technology occupations in Washtenaw County has driven growth in employment. In 2017, 9,245 Washtenaw County workers were employed in IT occupations compared 8,936 in 2016. The number of Washtenaw County workers employed in the IT occupation has increased every year in the last decade. 2013 employment surpassed pre-recession employment numbers from 2001 when 7,365 workers held IT jobs.

## Online Job Postings



## Employment Over Time

Q1 2017



Data: EMSI  
Analysis: Workforce Intelligence Network

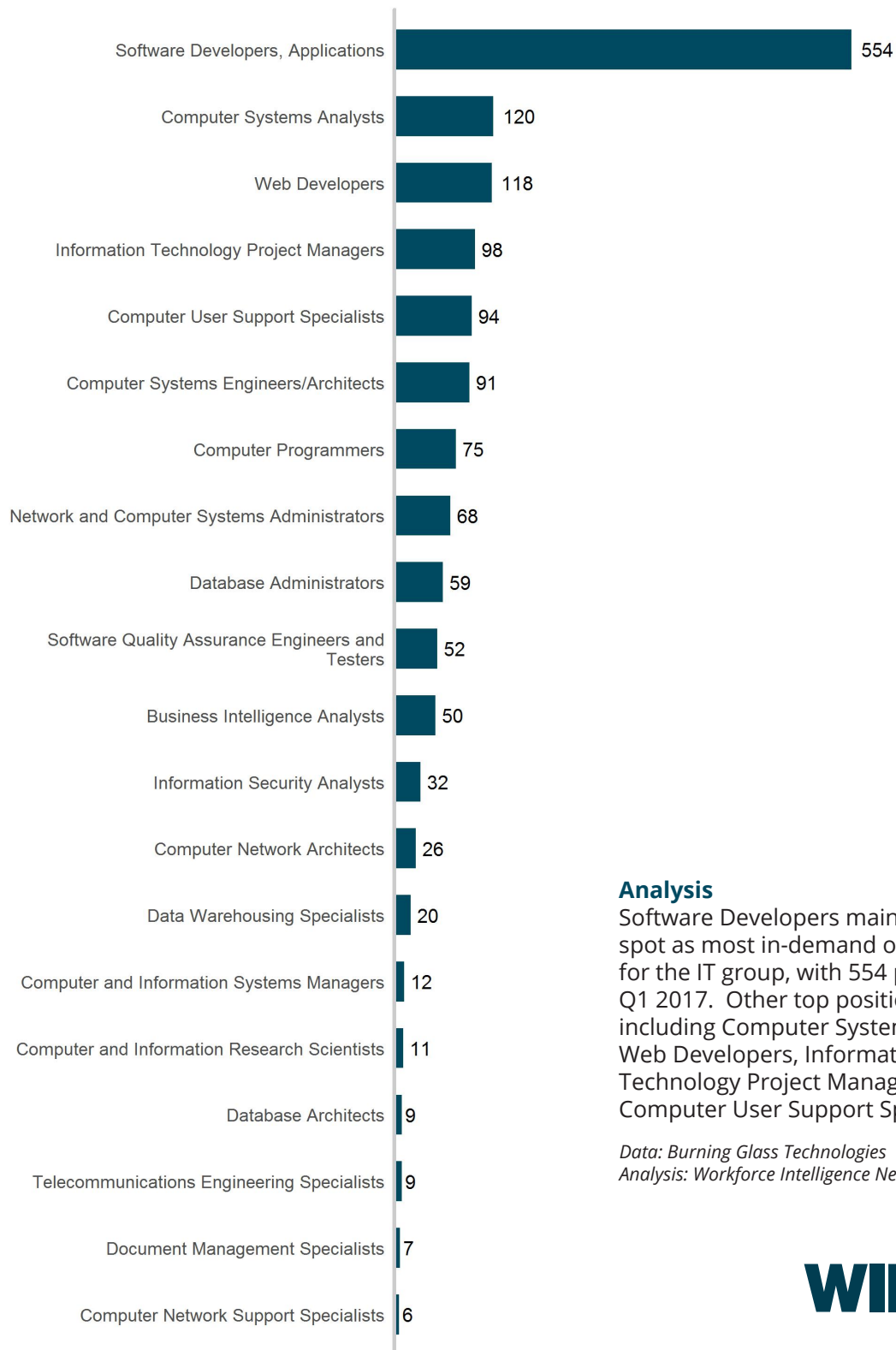


Now hiring: 1,530 IT  
job ads



9,250 IT employees  
surpassing pre-recession levels

### Information Technology Top Jobs Q1 2017



#### Analysis

Software Developers maintained their spot as most in-demand occupation for the IT group, with 554 postings in Q1 2017. Other top positions including Computer Systems Analysts, Web Developers, Information Technology Project Managers, and Computer User Support Specialists.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Mean advertised salary:  
\$77,381

62%  
of IT ads offer  
full-time work

### Information Technology Educational Attainment Required

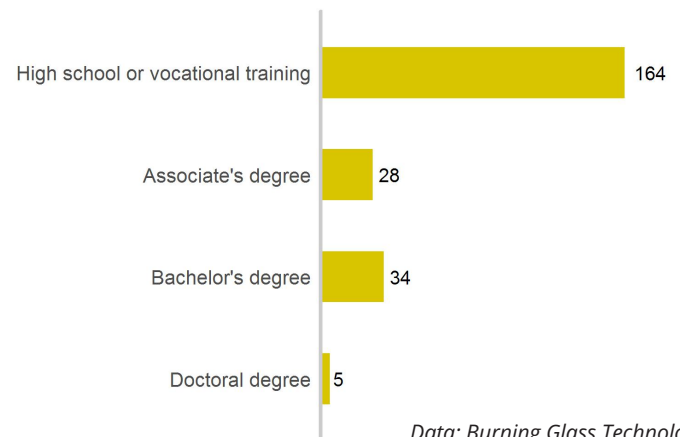
Of the 1,530 online job ads posted for Information Technology occupations in Washtenaw County, 1,089 specified a desired minimum level of educational attainment for job applicants. Traditionally, employers looking to hire for some of the most in-demand IT occupations, like software developers, seek candidates with a college degree. The vast majority of Q1 2017 job ads specifying education (920 postings) required a bachelor's degree. Many other IT jobs are within reach for applicants willing to undertake some vocational training or complete an associate's degree (132 postings).

The Information Technology jobs open in Washtenaw County are more concerned with prior experience, per job posting data. A little over a third (592 postings) of Q1 IT job postings required 3 to 5 years of experience. Around half that (254 postings) were open to entry level workers with less than 2 years of experience.

### In-Demand Areas of Study

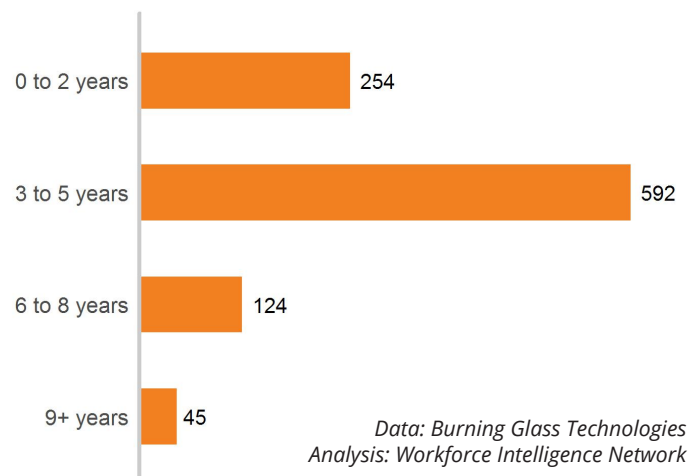
- Computer science
- Engineering, general
- Business administration and management
- Management information systems
- Electrical and electronic engineering technologies

### Educational Attainment



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Experience Required



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



In-demand skills:  
SQL, Java, Python, C++



In-demand certifications:  
PMP, ABET, CISSP

### Information Technology in-Demand Skills

Good communication skills and the ability to collaborate with a team are foundational skills for employment in Information Technology occupations in Washtenaw County. During Q1 2017, Washtenaw County employers were seeking job candidates with technical skills in SQL, Java, Python, and other programming languages. Job postings also indicate that experience in customer service, technical support, and project management are important for Washtenaw County jobseekers interested in IT positions.

#### Technical in-Demand Skills

- Programming: SQL, Java, Python, C++
- Software development, engineering
- Project management
- Technical support
- Customer Service

#### Foundational In-Demand Skills

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

#### Job Type

- Temporary: 4.3%
- Full-Time: 61.0%
- Part-Time: 0.72%

#### Certifications Required

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





Education required:  
Bachelor's Degree



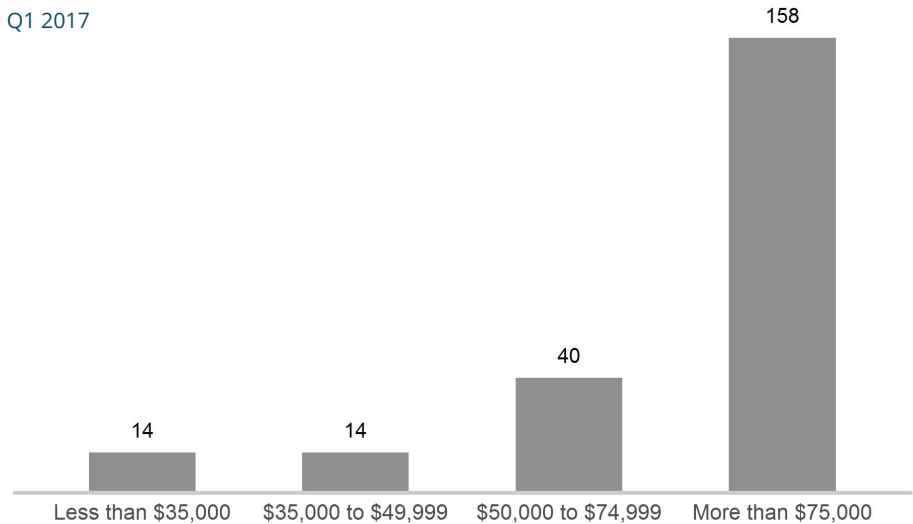
Knowledge areas: Engineering  
Computer Science, and Business

## Information Technology Wages

Information Technology occupations are among the highest paying for Washtenaw County workers. Of the 226 Q1 job postings that advertised a wage or salary, 158 offered annual earnings greater than \$75,000. Wage data from the Bureau of Labor Statistics show that wages for many in-demand IT jobs in Washtenaw County top \$35 an hour at the median, or over \$72,000 annually.

## Advertised Wages in Job Postings

Q1 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
15-1121	Computer Systems Analysts	\$24.90	\$32.41	\$42.22	\$52.19	\$61.08
15-1134	Web Developers	\$17.84	\$20.97	\$26.29	\$32.47	\$38.64
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	Computer Systems Engineers/Architects	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1131	Computer Programmers	\$21.82	\$26.55	\$33.45	\$41.75	\$48.88
15-1142	Network and Computer Systems Administrators	\$22.44	\$28.27	\$36.76	\$44.60	\$52.88
15-1141	Database Administrators	\$25.15	\$32.59	\$42.84	\$51.69	\$59.65
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.

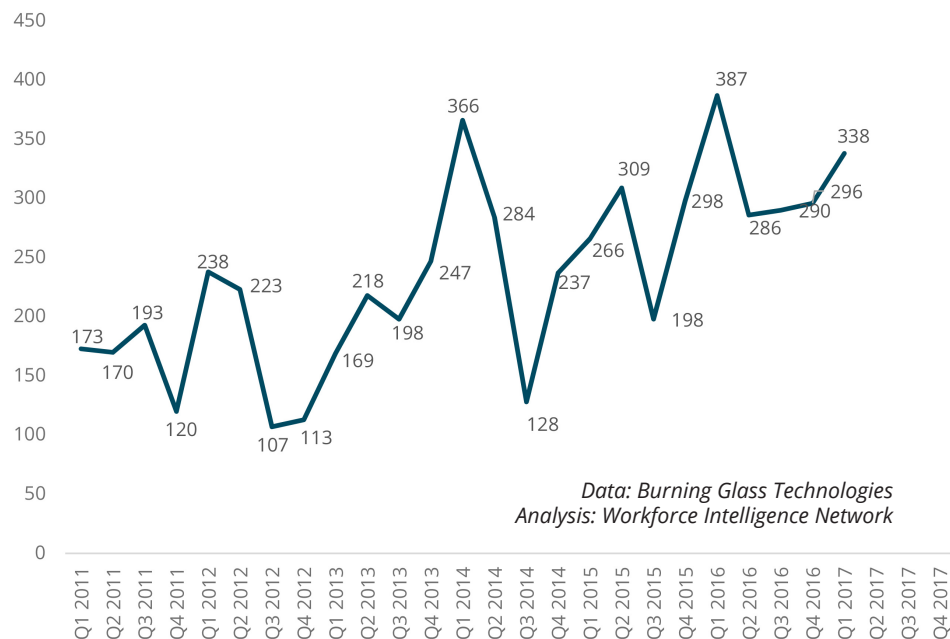
## Job Posting Analysis

Washtenaw County advanced manufacturing employers posted approximately 40 more job ads for Skilled Trades workers during Q1 2017 than in Q4 2016. Q1 2016 reported the highest demand level since the outset of job posting records in 2011, with 387 job postings. During 2016, the number of postings dropped dramatically by 101 postings into Q2 2016. Since then, demand has increased by 52 postings for 338 ads in Q1 2017. Overall demand for skilled trades workers is growing in Washtenaw County.

## Employment Analysis

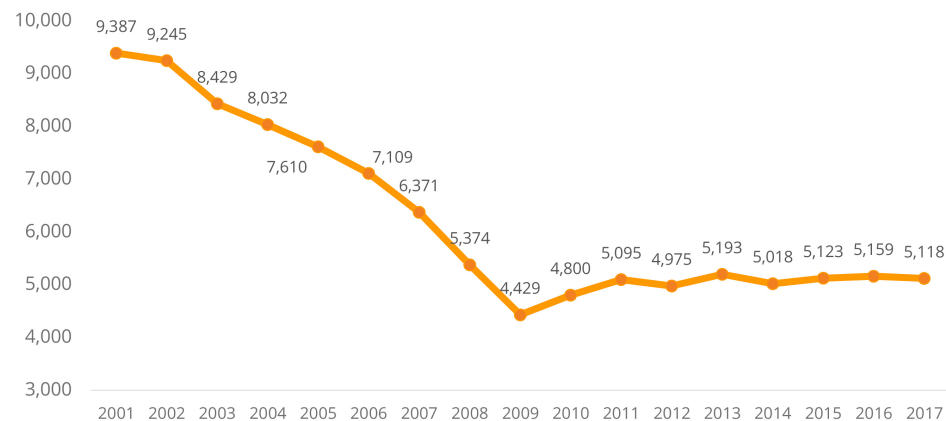
In 2017, 5,118 Washtenaw County workers are employed in the skilled trades occupations. Despite the growing demand for skilled trades workers in the county, employment numbers have stayed relatively stable over the past few years, with approximately 5,000 employees each year since 2010. This could be a signal that many postings are either unfilled or focused on replacement hires, or simply the result of more employers shifting to online hiring tools.

## Online Job Postings



## Employment Over Time

Q1 2017



Data: EMSI  
Analysis: Workforce Intelligence Network



Education required: High School Diploma/ Vocational Training

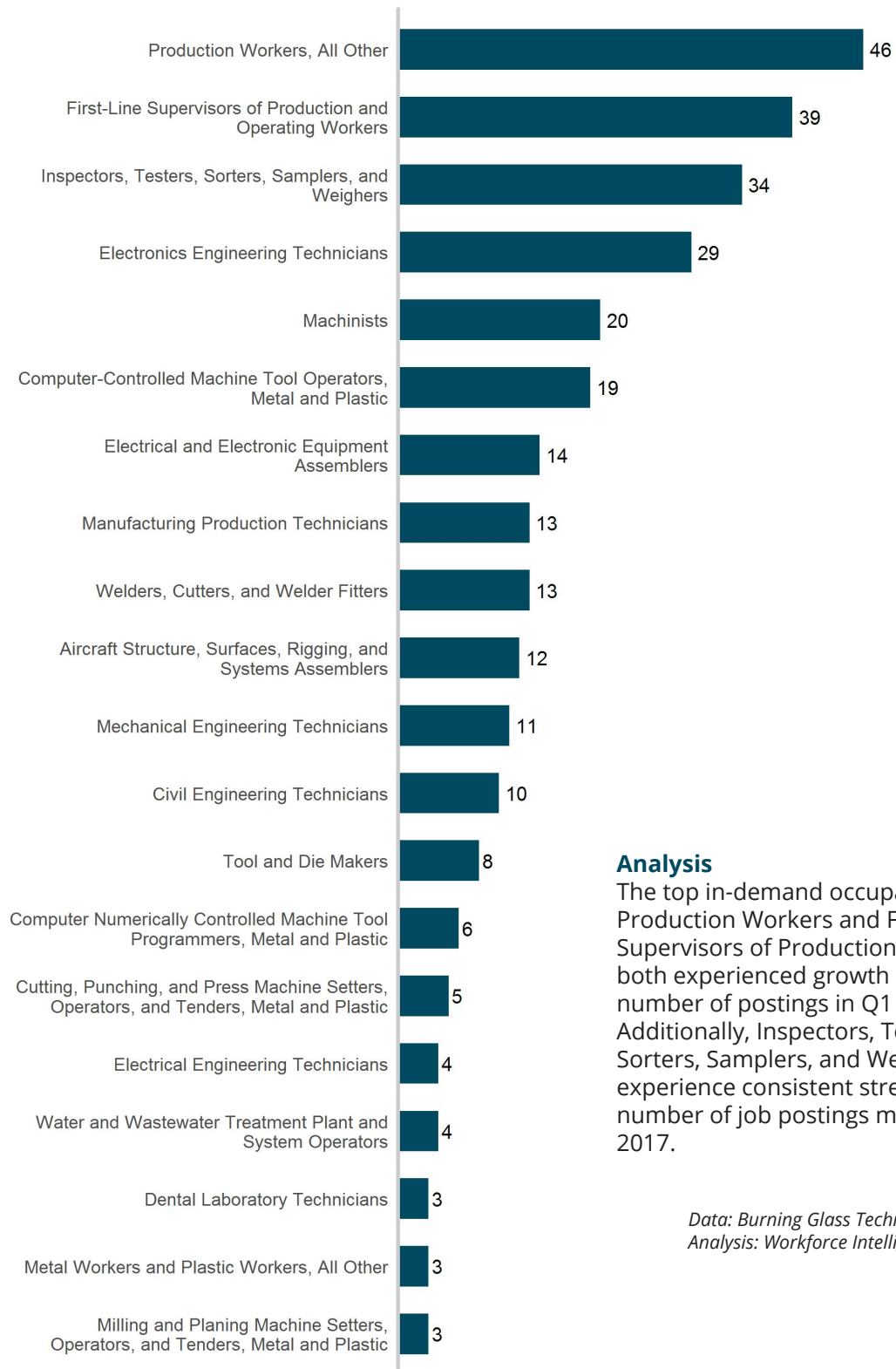


Experience required: less than 5 years

## Skilled Trades & Technicians

### Top Jobs

Q1 2017



### Analysis

The top in-demand occupations Production Workers and First-Line Supervisors of Production Workers both experienced growth in the number of postings in Q1 2017. Additionally, Inspectors, Testers, Sorters, Samplers, and Weighers experience consistent strength in the number of job postings moving into 2017.

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Now hiring:  
338 Skilled Trades postings

72%  
of skilled trades ads offer  
full-time work

### Skilled Trades & Technicians Educational Attainment Required

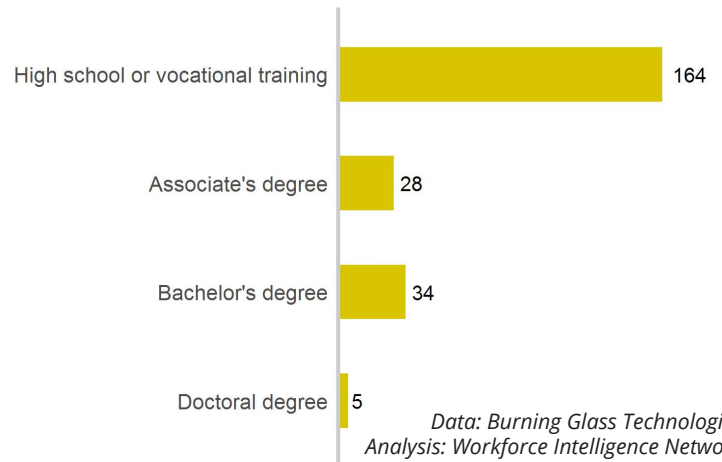
Only 231 of the 338 Q1 2017 Skilled Trades job postings specified a desired level of educational attainment. The distribution of these requirements is shown in the graph to the right: almost all jobs are attainable with a high school diploma and/or some vocational training. Most employers require training outside of high school but not all training results in a formal credential. Twenty-eight postings required an associate's degree and 34 postings explicitly requested that applicants hold a bachelor's degree – these postings tend to be for management roles within the Skilled Trades occupations.

A similar number of job ads specified a desired experience level for Skilled Trades workers. The data show that most Skilled Trades jobs available in Washtenaw County are within reach for workers with less than 5 years of experience (140 postings during Q1). Again, those jobs requiring more experience, 6 years and beyond, are likely for management occupations included in this group.

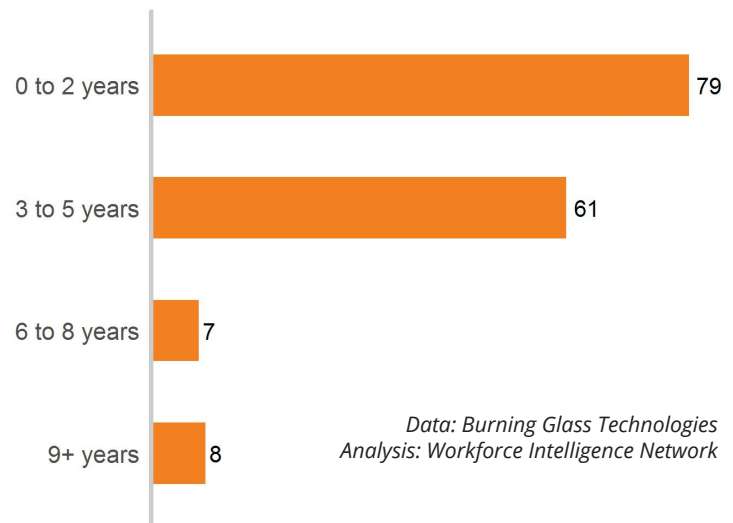
### In-Demand Areas of Study

- Engineering, General
- Biomedical/Medical Engineering
- Electrical and Electronic Engineering Technologies
- Economics, General
- Business Administration and Management, General

### Educational Attainment



### Experience Required





Mean advertised salary:  
\$45,000



Knowledge areas:  
Engineering and Drafting

### Skilled Trades & Technicians In-Demand Skills

The occupations in the skilled trades group require a wide array of technical skills, like computer numerical control (CNC), machining, and welding, along with more foundational skills. Employers are also seeking foundational skills like communication and organizational skills in their candidates. Those looking to fill managerial positions within this occupation group are expected to have supervisory skills, such as planning, scheduling, and leadership, in addition to the technical proficiencies skilled trades workers must have.

#### Technical In-Demand Skills

- Inspection and repair
- Machining, computer numerical control (CNC)
- Microsoft Office
- Welding
- Scheduling

#### Foundational In-Demand Skills

- Communication Skills
- Mathematics
- Detail-oriented
- Organizational skills
- Troubleshooting

#### Job Type

- Temporary: 5.6%
- Full-Time: 71.9%
- Part-Time: 0.1%

#### Certifications Required

- First Aid CPR AED
- Security Clearance
- American Board for Engineering and Technology (ABET) Accredited
- American Registry of radiologic Technologists (ARRT)
- Engineer in Training Certification



## In-demand certifications: CPR/AED and Security Clearance



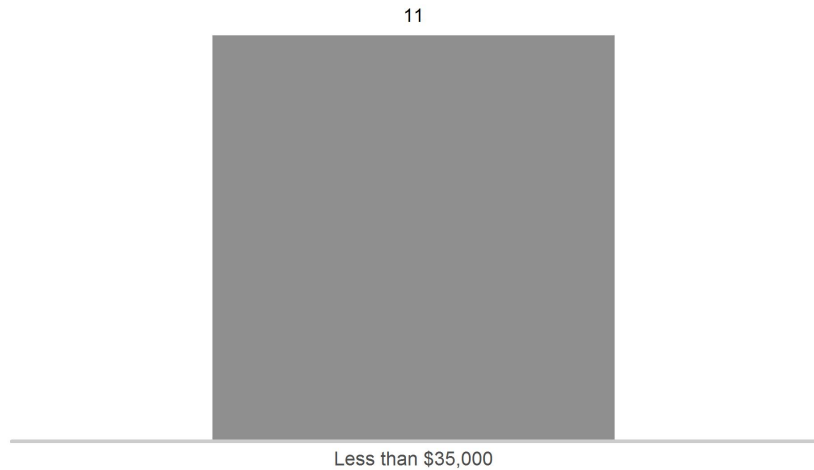
## Skills desired: Inspection, CNC, Repair, and Welding

### Skilled Trades & Technicians Wages

Thirty-nine percent (135 postings) of Skilled Trades job postings in Washtenaw County during Q1 2017 advertised a wage or salary range. Around half of those (74 postings) offered wages that amount to less than \$35,000 a year, or less than \$17 per hour. Skilled Trades occupations tend to be some of the lowest paying in southeast Michigan and across the country. However, it is important to remember that online postings skew toward entry level openings, and wage data from the Bureau of Labor Statistics show that seven of the top skilled trades occupations offer median wages above \$17 an hour.

### Advertised Wages in Job Postings

Q1 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
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
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$11.38	\$13.62	\$18.70	\$23.08	\$28.44
51-2022	Electrical and Electronic Equipment Assemblers	\$9.31	\$10.49	\$13.10	\$17.72	\$22.87
17-3029	Manufacturing Production Technicians	\$20.49	\$26.65	\$31.91	\$36.96	\$44.69
51-4121	Welders, Cutters, and Welder Fitters	\$12.73	\$15.15	\$17.87	\$22.25	\$28.27
51-2011	Aircraft Structure, Surfaces, Rigging, and Systems Assemblers	\$15.21	\$18.59	\$23.73	\$30.52	\$34.52

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	182,801	180,796	181,611	184,360	186,996	188,370	191,860	<b>193,961</b>	2,101	1.1%
Employment	167,969	168,467	170,803	173,523	177,822	181,408	185,274	<b>188,534</b>	3,260	1.8%
Unemployment	14,832	12,330	10,808	10,837	9,174	6,962	6,586	<b>5,427</b>	-1,159	-17.6%
Unemployment Rate	8.1%	6.8%	6.0%	5.9%	4.9%	3.7%	3.4%	<b>2.8%</b>	-0.6%	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	191,016	191,064	190,571	194,788	<b>193,961</b>	-828	-0.4%	2,944	1.5%
Employment	184,999	184,444	182,899	188,752	<b>187,643</b>	-1,109	-0.6%	2,644	1.4%
Unemployment	6,017	6,619	7,672	6,036	<b>6,318</b>	282	4.7%	301	5.0%
Unemployment Rate	3.1%	3.5%	4.0%	3.1%	<b>3.3%</b>	0.2%	na	0.1%	na

*\*Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics

### Monthly Labor Market Data








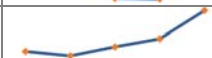



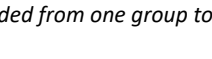
	January 2016	February 2016	March 2016	April 2016	May 2016	June 2016	July 2016	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017	February 2017	March 2017
Labor Force	188,017	192,240	192,792	193,205	190,013	189,973	189,589	189,651	192,473	195,056	195,715	193,594	192,463	194,869	194,550
Employment	182,228	186,345	186,425	187,327	183,512	182,494	180,915	182,165	185,617	187,923	190,009	188,325	185,861	188,034	189,034
Unemployment	5,789	5,895	6,367	5,878	6,501	7,479	8,674	7,486	6,856	7,133	5,706	5,269	6,602	6,835	5,516
Unemployment Rate	3.1%	3.1%	3.3%	3.0%	3.4%	3.9%	4.6%	3.9%	3.6%	3.7%	2.9%	2.7%	3.4%	3.5%	2.8%

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

Data: Bureau of Labor Statistics



# Washtenaw 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	11,951	11,020	11,232	11,328	12,912		8.0%	17.2%
Agriculture	223	197	175	173	220		-1.3%	11.7%
Business & finance	775	684	689	737	747		-3.6%	9.2%
Construction	146	132	100	80	91		-37.7%	-31.1%
Customer service	2,577	2,255	2,584	2,529	2,705		5.0%	20.0%
Education	194	259	347	416	332		71.1%	28.2%
Energy	4	4	5	7	7		75.0%	75.0%
Engineers & designers	512	480	374	372	465		-9.2%	-3.1%
Health care	1,696	1,614	1,778	1,926	2,444		44.1%	51.4%
Information technology	1,606	1,499	1,207	1,255	1,530		-4.7%	2.1%
Skilled trades & technicians	387	286	290	296	338		-12.7%	18.2%
Transportation, distribution, and logistics	491	646	687	434	419		-14.7%	-35.1%

*\*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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