



# WASHTENAW COUNTY

## WIN Quarterly Report



# Introduction: Washtenaw 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 Washtenaw 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:

- Skilled trades (manufacturing focused) (page 7)
- Engineers & designers (manufacturing focused) (page 12)
- Business & finance (page 17)
- Health care (page 22)
- Information technology (page 27)

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: Washtenaw County

## Key Findings

### 1. Washtenaw County workers continue to find employment.

Employment in Washtenaw County grew 1.5% between Q1 and Q2 2016. This is indicative of overall growth: employment in the county has grown 4.6% since 2015 and the county's unemployment rate has dropped every year since 2010. (See page 4 for details).

### 2. Washtenaw County employers are struggling to hire in the Skilled Trades and Engineering & Design occupations.

High and sustained demand in the Skilled Trades and Engineering & Design occupation groups over the past several quarters may be an indication that employers in the county have positions going unfilled or are focused on replacement hires. (See pages 7 and 12 for details).

### 3. Engineering & Design and Information Technology (IT) are the highest paying occupation groups in Washtenaw County.

Jobs in these two occupation groups advertised salaries over \$75,000, with average advertised salaries nearing or surpassing \$80,000. Engineering & Design and IT also represent occupations that most likely require higher educational attainment like a bachelor's degree in order to earn high wages. (See pages 12 and 27 for details).

### 4. Sustained high demand for the Health Care occupations has driven employment growth, making this group one of Washtenaw County's largest.

Nearly 30,000 Washtenaw County workers are employed in Health Care occupations. Employers here continue to hire job candidates with a range of expertise and knowledge areas, including nursing, public health, business, and law. (See page 22 for details).

### 5. Business & Finance occupations are becoming an important part of the Washtenaw County labor force.

Demand for Business & Finance workers has driven employment growth since the end of the recession. Many jobs in this occupation group require higher educational attainment like a bachelor's degree and allow for salary growth. (See page 17 for details).



# Executive Summary

## Postings Over Time

Total online job postings by employers in Washtenaw during Q2 2016 dropped 8%, from 11,951 in Q1 to 11,020. Employer demand fluctuates quarter to quarter and, despite the drop between Q1 and Q2, the overall all trend for demand in Washtenaw County is upward.

## Total Online Job Postings

Q1 2011 - Q2 2016



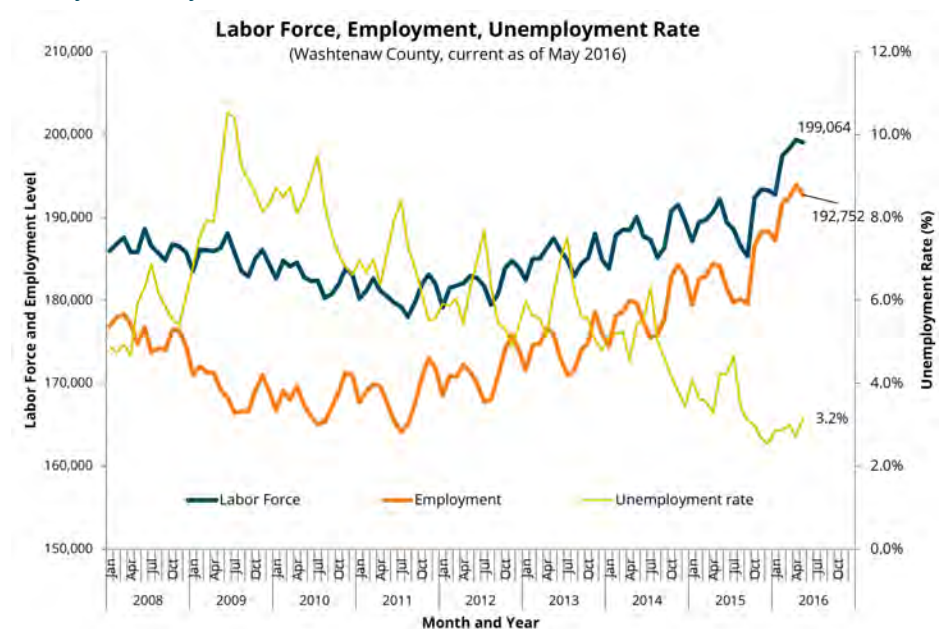
Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Labor Force, Employment, & Unemployment

The Washtenaw County labor force grew by 3,024 workers from Q1 to Q2 2016, a 1.5% increase to 199,234 workers in the market during Q2. Employment grew at the same rate, 1.5%, between quarters to 193,353 employees, leaving the quarterly unemployment rate nearly unchanged at 3.0%. Employment in Washtenaw County has grown 4.6% since 2015. The unemployment rate in Washtenaw County has dropped every year since it stood at 8.1% in 2010 and the economy has added over 23,000 jobs during the same time period.

## Labor Force, Employment, Unemployment Rate

January 2011 - May 2016



Data: BLS  
Analysis: Workforce Intelligence Network



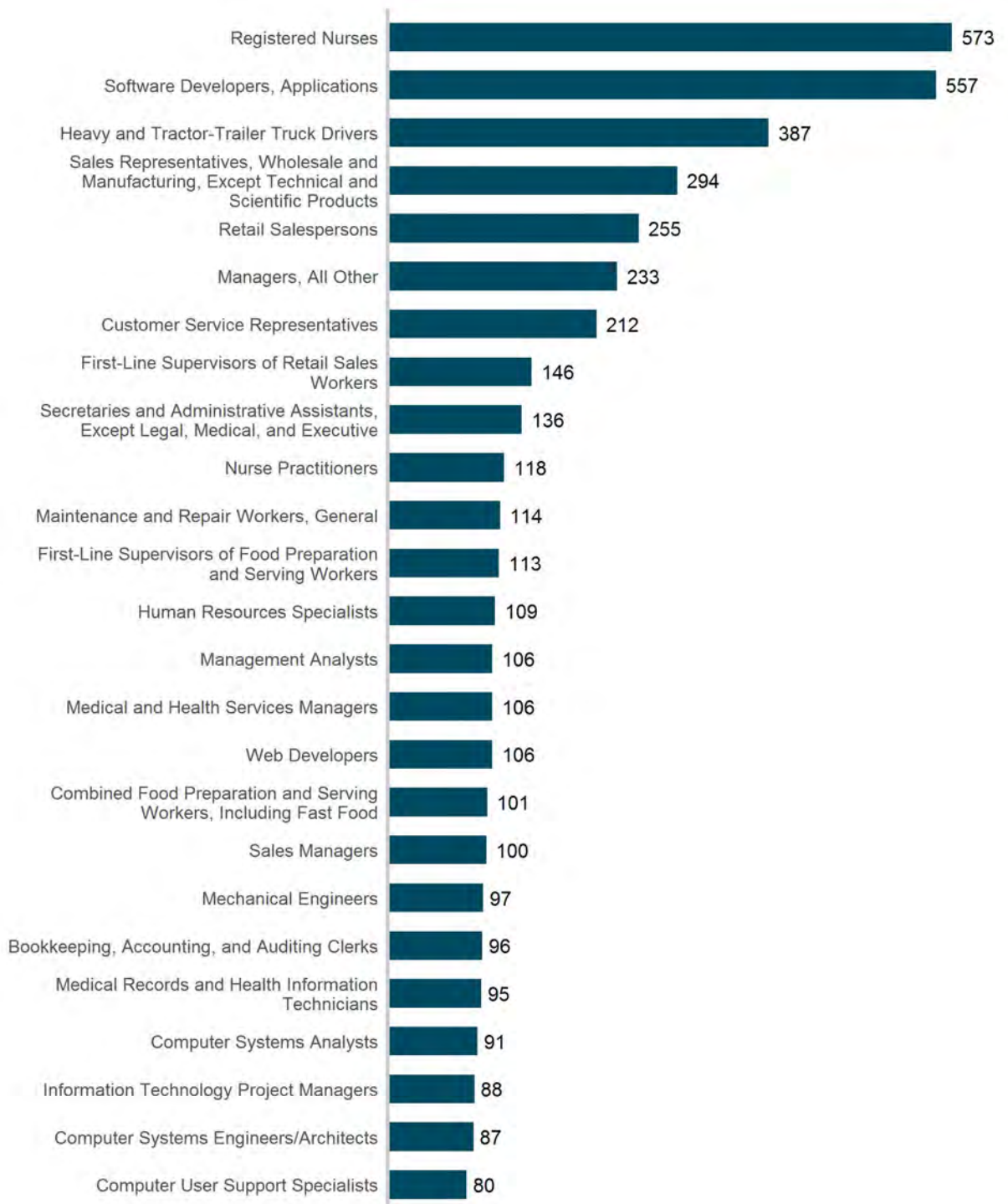


Most in-demand: software  
developers, registered nurses

3.0%  
unemployment rate

### Top Jobs In Demand

Quarter 2 2016





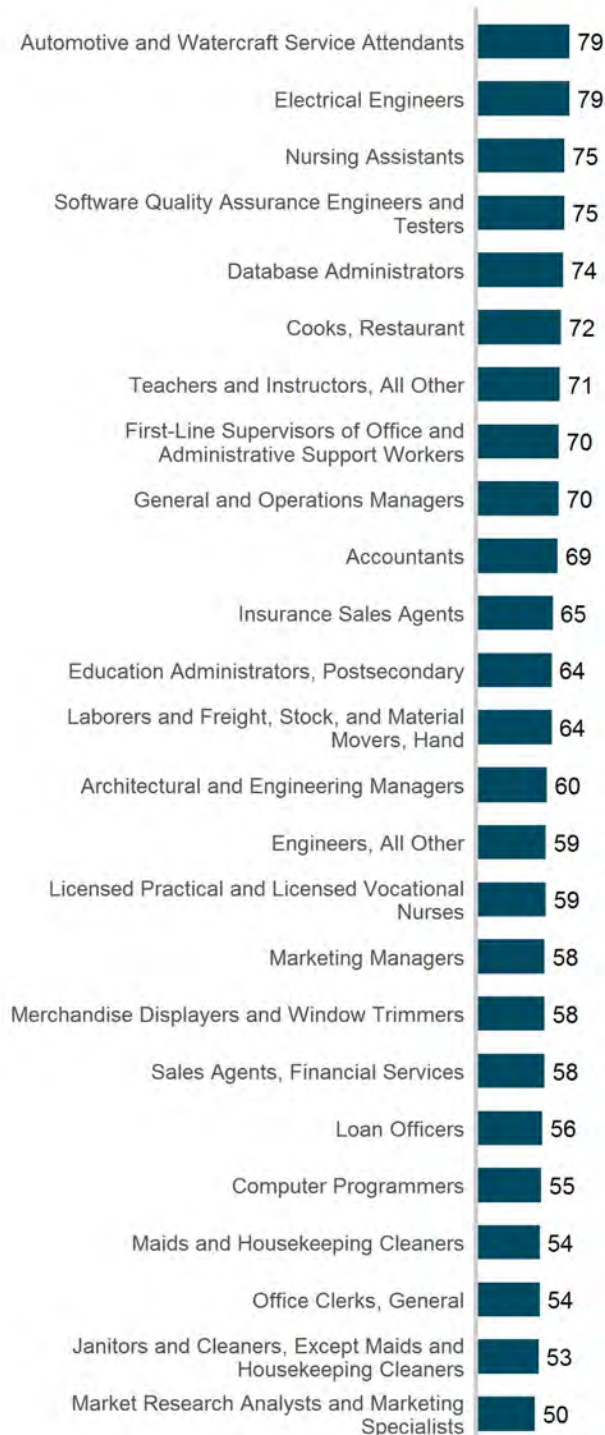
Now hiring:  
11,000 job postings



4.6% annual growth  
in employment

### Top Jobs In Demand

Quarter 2 2016





# Skilled Trades & Technicians (Manufacturing Focused)

## Introduction

### Skilled Trades & Technicians

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.

### Postings Over Time

Washtenaw County advanced manufacturing employers posted approximately 100 fewer job ads for Skilled Trades workers during Q2 2016 than in Q1. The 286 Skilled Trades job postings in Q2 represent a 26% drop from Q1 numbers; Q1 2016 had the highest demand for Skilled Trades workers seen in Washtenaw County since the beginning of the analysis period in Q1 2011 (387 postings). Despite a drop in demand this quarter, overall demand for Skilled Trades workers is growing in Washtenaw County.

### Employment Over Time

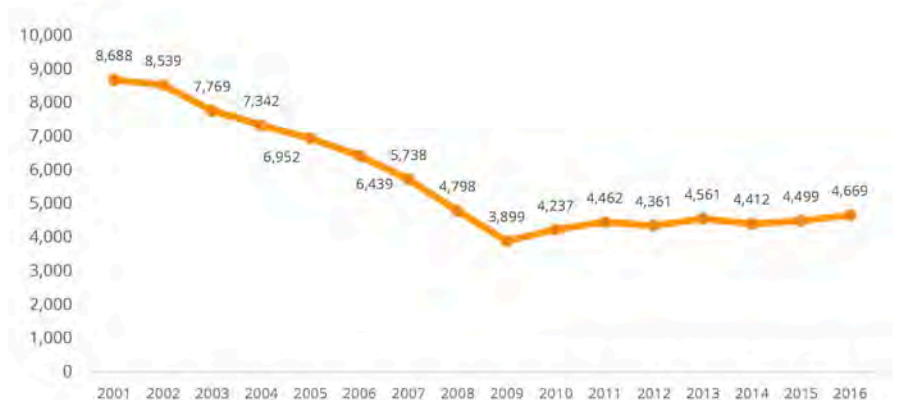
In 2016, 4,669 Washtenaw County workers are employed in the Skilled Trades occupations. Despite the growing demand for Skilled Trades workers in the county, employment numbers have stayed relatively stable over the past few years, hovering just above 4,500 employees since 2013. This is a signal that many postings are either going unfilled or that they are focused on replacement hires.

### Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Employment Over Time



Data: EMSI, BLS  
Analysis: Workforce Intelligence Network



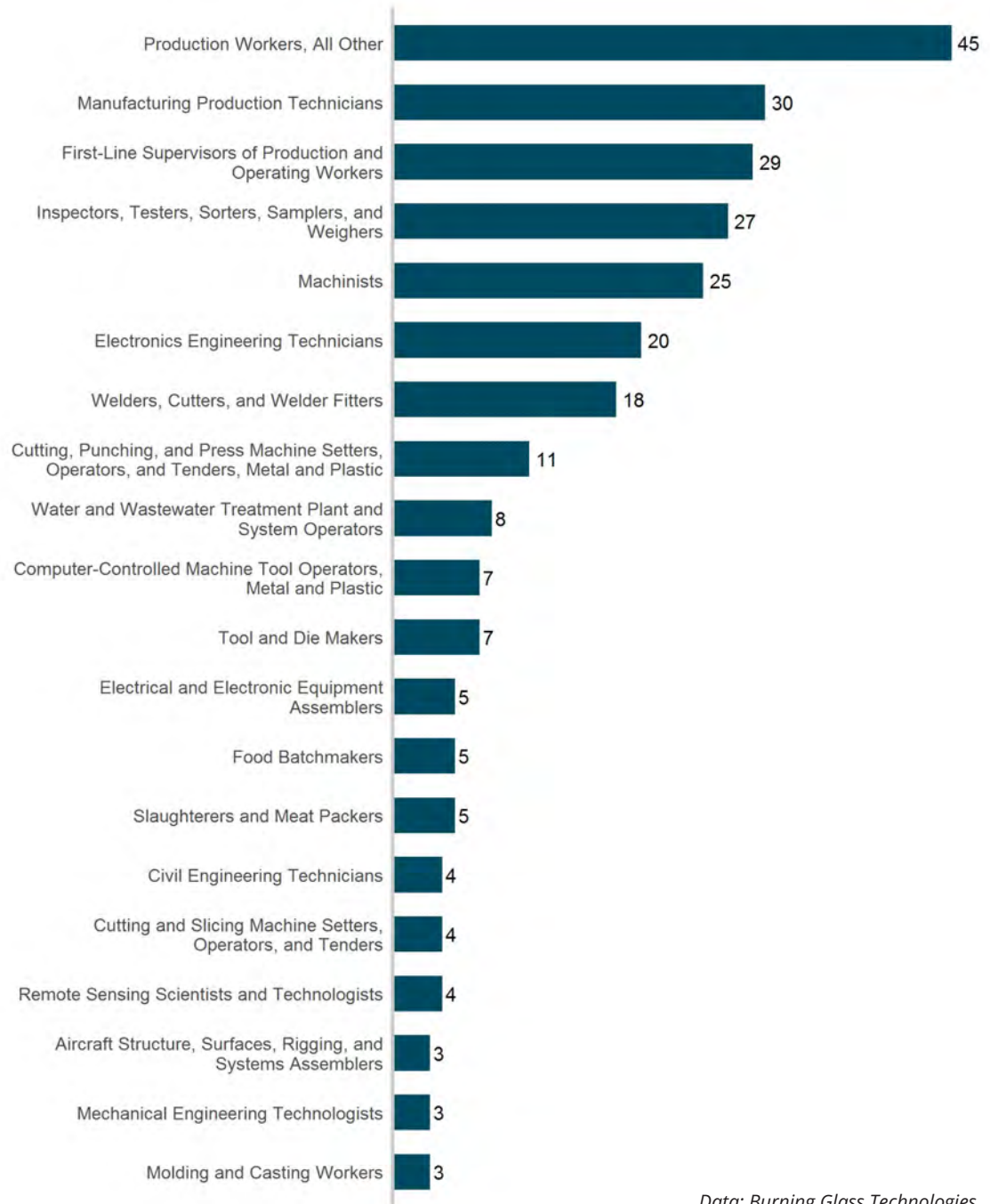
Now hiring:  
286 online job postings



Education required:  
HS diploma & training

### Skilled Trades and Technicians Top Jobs

Quarter 2 2016



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Experience required:  
less than 5 years

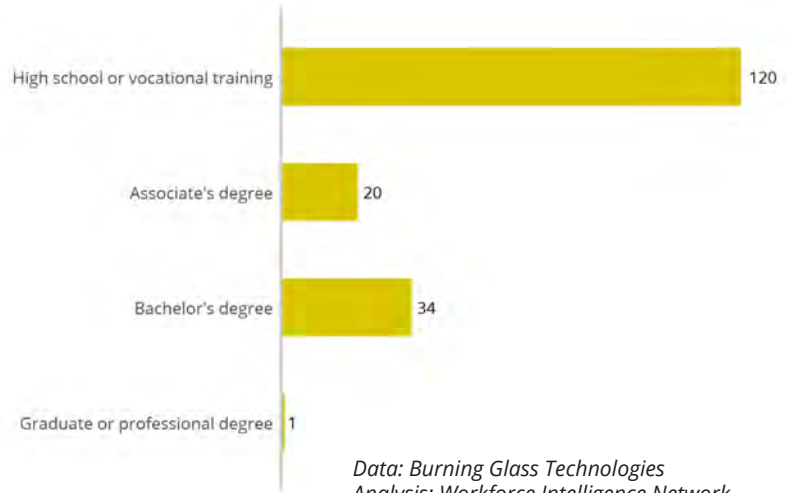
55%  
ads for full-time positions

### Skilled Trades & Technicians Educational Attainment & Experience Required

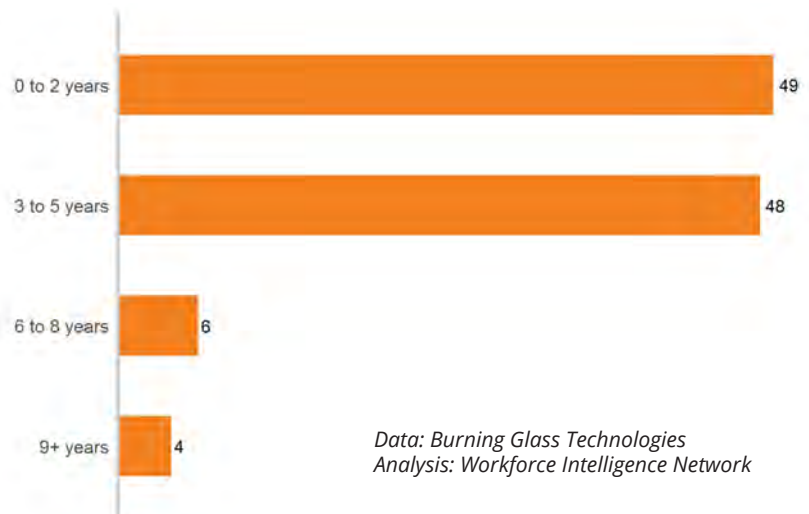
Just 175 of the 286 Q2 Skilled Trades job postings specified a desired level of educational attainment. The distribution of these requirements can be seen in the graph to the right: almost all jobs are attainable with a high school diploma and/or some vocational training. Most employers require training outside of high school but not all training results in a formal credential. Twenty 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 (97 postings during Q2). Again, those jobs requiring more experience, 6 years and beyond, are likely for some management occupations included in this group.

### Minimum Educational Attainment Required Q2 2016Q1



### Experience Required Q2 2016Q1 2016



### Areas of Study In-Demand Q2 2016Q1 2016

- Mechanical engineering
- Business administration and management
- Chemistry
- Environmental health engineering
- Information technology



Knowledge areas: mechanical  
engineering, chemistry

\$41,446  
mean advertised salary

### Skilled Trades & Technicians In-Demand Skills Q2 2016Q1 2016

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. Job postings in the Skilled Trades occupation group for Q2 2016 listed required experience with inspection and repair and hand tools. Employers are also seeking foundational skills like communication and organizational skills in their candidates. Many Skilled Trades jobs also require some degree of physical demand.

#### In-Demand Technical Skills

- Computer numerical control (CNC)
- Inspection and repair
- Hand tools
- Welding
- Mathematics

#### In-Demand Foundational Skills

- Communication skills
- Organizational skills
- Problem solving and troubleshooting
- Physical demand
- Quality assurance and control

#### Job Type

- Temporary: 14.7%
- Full-Time: 54.8%
- Part-Time: 3.1%

#### Certifications In-Demand

- Commercial driver's license (CDL) Class A
- Certified Information Security Manager (CISM), Auditor (CISA), Security Professional (CISSP)
- Security clearance
- HVAC technician certifications (e.g. EPA 608)
- Microsoft Certified Systems Administrator (MCSA)





In-demand certifications:  
CDL, information security

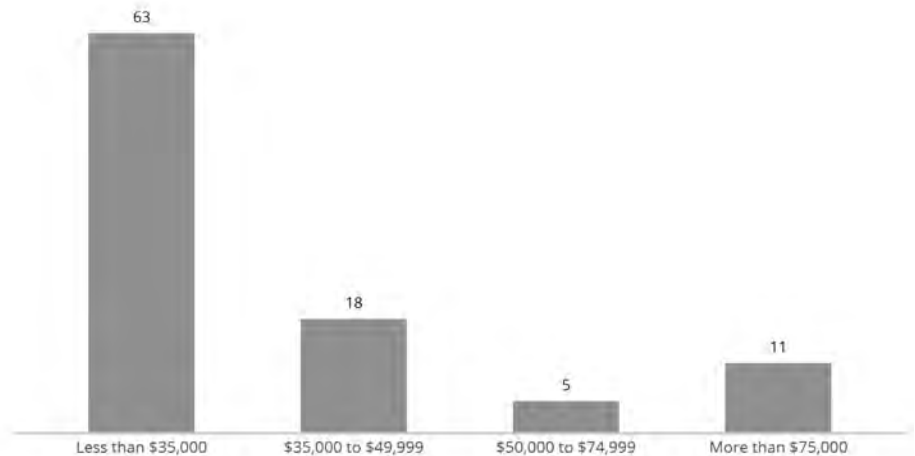


Technical skills:  
CNC, welding, packaging

## Skilled Trades & Technicians Wages

Thirty-four percent (97 postings) of Skilled Trades job postings in Washtenaw County during Q1 2016 advertised a wage or salary range. The majority of those (63 postings) offered wages that amount to less than \$35,000 a year, or less than \$17 per hour. The Skilled Trades occupations tend to be some of the lowest paying in southeast Michigan and across the country. Wage data from the Bureau of Labor Statistics show that the highest paid occupations in the group are in management, like first-line supervisors of production workers.

## Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
51-9199	Production Workers, All Other	\$9.52	\$10.57	\$12.49	\$16.85	\$18.63
17-3029	Manufacturing Production Technicians	\$13.48	\$18.22	\$26.65	\$35.02	\$38.36
51-1011	First-Line Supervisors of Production and Operating Workers	\$19.51	\$24.06	\$29.66	\$36.72	\$43.37
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.77	\$11.52	\$14.77	\$22.84	\$29.40
51-4041	Machinists	\$13.44	\$18.63	\$24.42	\$27.69	\$29.67
17-3023	Electronics Engineering Technicians	\$14.96	\$17.88	\$25.41	\$32.68	\$37.44
51-4121	Welders, Cutters, and Welder Fitters	\$12.55	\$14.87	\$19.22	\$22.93	\$33.07
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$8.63	\$10.52	\$13.29	\$16.62	\$22.92
51-8031	Water and Wastewater Treatment Plant and System Operators	\$20.58	\$23.81	\$26.97	\$30.18	\$35.31
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$10.70	\$12.83	\$15.77	\$20.52	\$24.96

Data: EMSI, BLS  
Analysis: Workforce Intelligence Network

# Engineers & Designers (Manufacturing Focused)

## Introduction

### Engineers & Designers

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.

### Postings Over Time

Washtenaw County employers posted 480 online job ads for advanced manufacturing-focused Engineers & Designers during Q2 2016, down slightly from 512 ads in Q1. Quarterly demand for Engineers & Designers, as gauged by online job postings, jumped from the low 300s to the high 400s in early 2015. This increased level of demand may be an indication that employers in Washtenaw are struggling to find qualified candidates, if postings are highly correlated with intent to hire.

### Employment Over Time

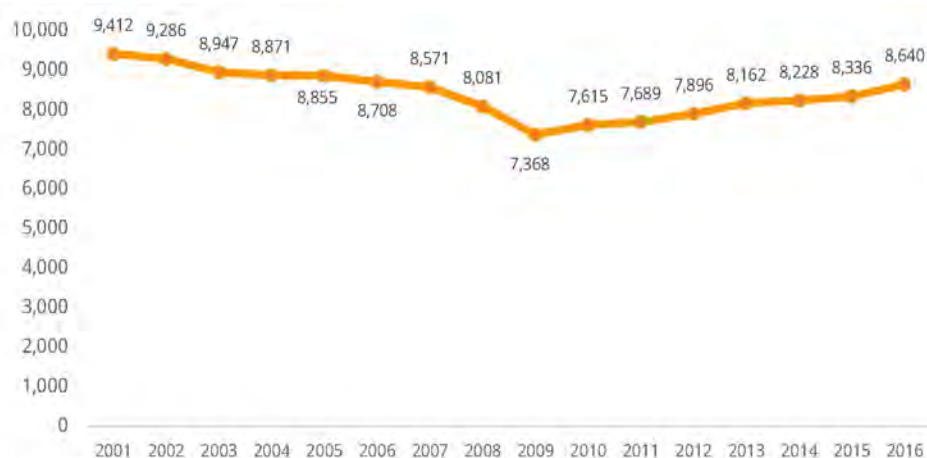
Employment in Washtenaw County's Engineering & Design occupations has been growing slowly and steadily each year since 2009. In 2016, 8,640 Washtenaw County workers are employed in these occupations, 1,272, or 17%, more than in 2009.

### Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Employment Over Time



Data: EMSI, BLS  
Analysis: Workforce Intelligence Network





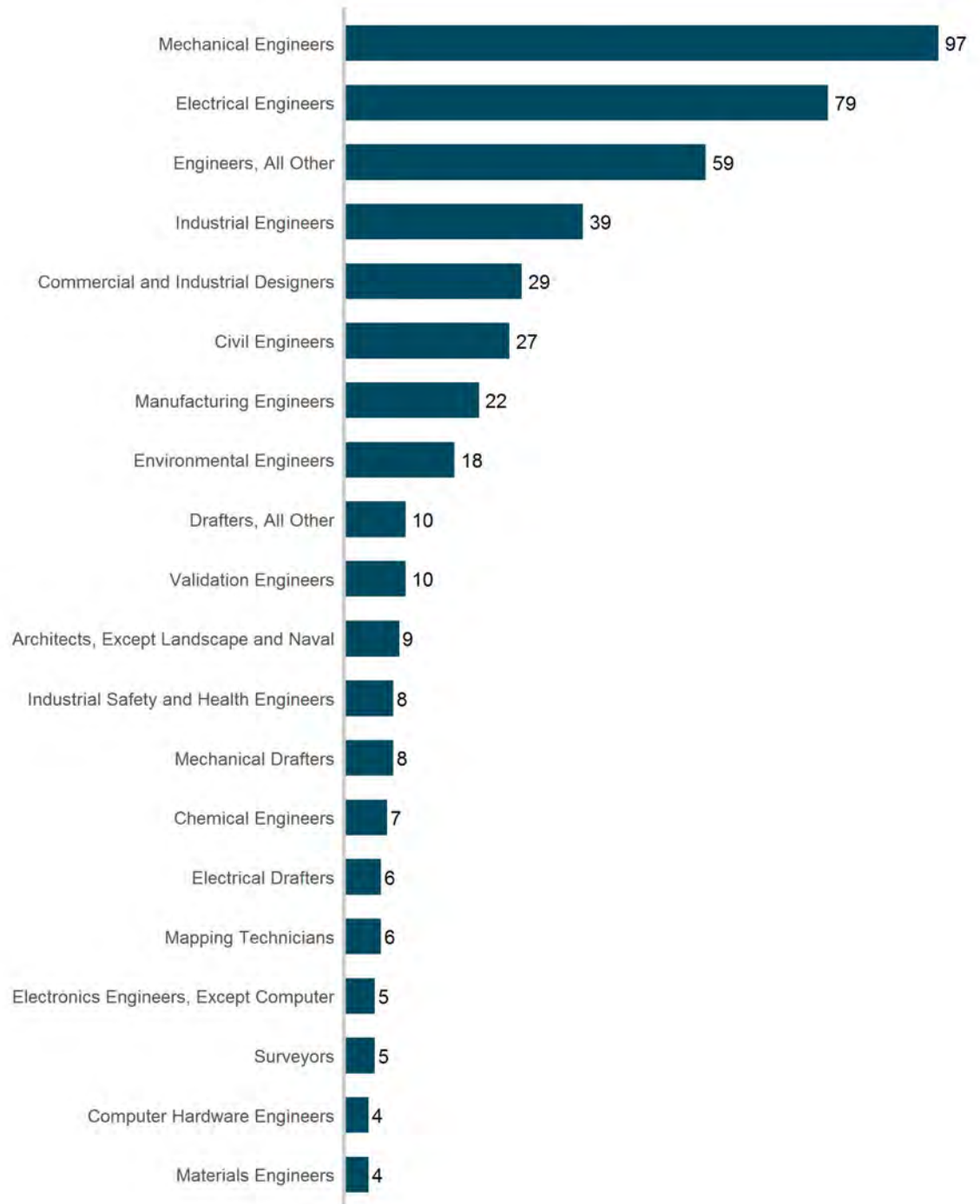
Now hiring: 480 Engineering & Design job postings



9,000 Engineering & Design employees

### Engineers & Designers Top Jobs

Quarter 2 2016





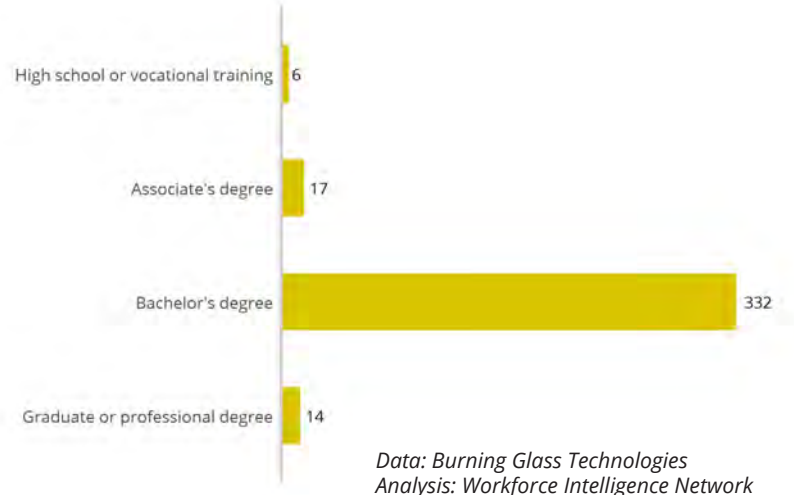
Education required:  
bachelor's degree

50%  
ads for full-time positions

### Engineers & Designers Educational Attainment & Experience Required

Workers in Engineering & Design occupations are generally required to hold bachelor's degrees. Job postings data from Q2 2016 show that 332 ads for Washtenaw County jobs required candidate's to have a bachelor's degree. Some Engineering & Design jobs, like drafters, are available to jobseekers with an associate's degree (17 postings). The majority of Engineering & Design job postings in Washtenaw County during Q1 2016 were targeting workers with less than 5 years of experience.

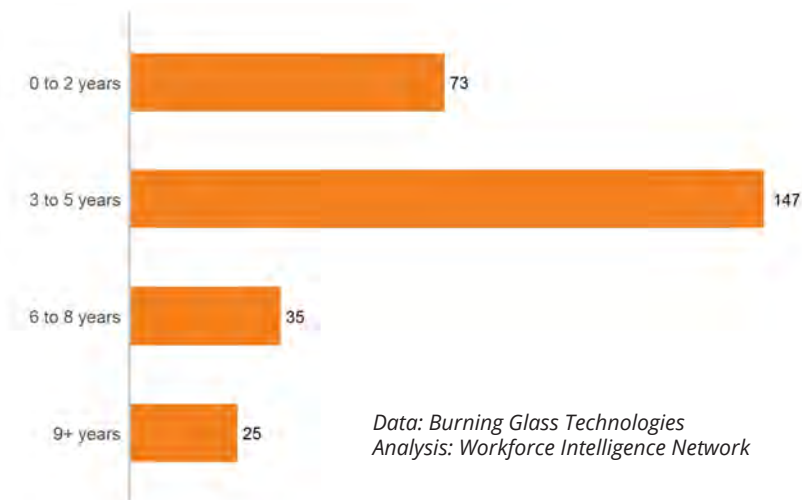
### Minimum Educational Attainment Required Q2 2016



### Areas of Study In-Demand Q2 2016

- Mechanical engineering
- Electrical and electronic engineering
- Computer science, computer engineering
- Bioinformatics
- Physics

### Experience Required Q2 2016





In-demand skills: project management, budgeting

\$79,461

mean advertised salary

### Engineers & Designers In-Demand Skills Q2 2016

Washtenaw County employers looking to hire workers for Engineering & Design occupations specified basic skills like communication, writing and research, and computer skills as prerequisites for employment in Q2 2016 job postings. Employers are also looking for more technical skills from Engineers & Designers like AutoCAD, and experience with project management, and budgeting and scheduling..

#### In-Demand Technical Skills

- Project management
- Scheduling
- Budgeting
- AutoCAD
- Customer service

#### In-Demand Foundational Skills

- Communication skills
- Writing and research
- Problem solving, troubleshooting
- Computer skills: Microsoft Office
- Teamwork/collaboration

#### Job Type

- Temporary: 5.8%
- Full-Time: 50.0%
- Part-Time: 0.6%

#### Certifications In-Demand

- American Board for Engineering and Technology (ABET)
- Professional Engineer (PE)
- HAZWOPER (Hazardous Waste Operations and Emergency Response)
- Six Sigma: Green Belt
- Leadership in Energy and Environmental Design (LEED)



In-demand certifications:  
PE, ABET, LEED

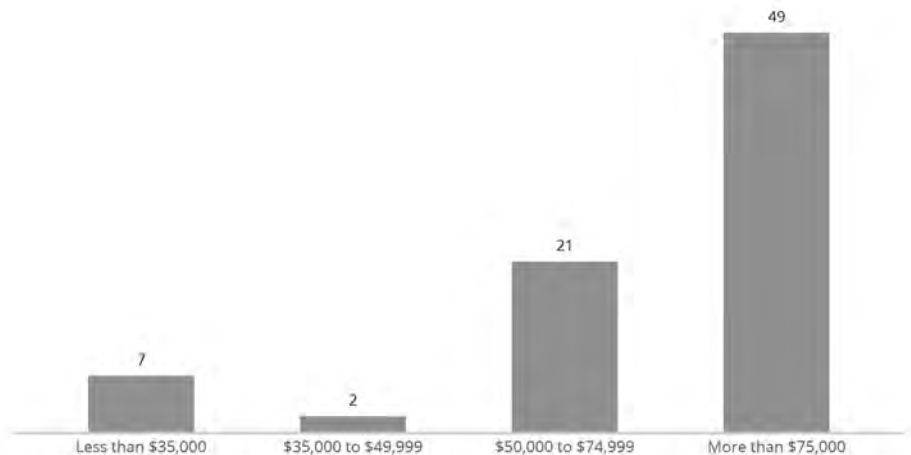


Knowledge areas: mechanical,  
electrical engineering

## Engineers & Designers Wages

Advanced manufacturing Engineering & Design occupations are some of the highest paying in Washtenaw County and throughout southeast Michigan. Seventy-nine Q2 job postings specified a wage or salary range, and of those that did, 49 advertised annual earnings over \$75,000. Nine 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 Salaries Quarter 2 2016



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2141	Mechanical Engineers	\$26.79	\$34.70	\$43.15	\$52.23	\$57.96
17-2071	Electrical Engineers	\$32.25	\$37.55	\$46.01	\$54.82	\$61.86
17-2199	Engineers, All Other	\$16.88	\$27.52	\$40.84	\$47.54	\$56.72
17-2112	Industrial Engineers	\$25.88	\$30.76	\$35.20	\$41.65	\$51.04
27-1021	Commercial and Industrial Designers	\$24.33	\$29.46	\$32.35	\$35.25	\$40.87
17-2051	Civil Engineers	\$18.63	\$23.97	\$32.78	\$42.52	\$49.82
17-2199	Manufacturing Engineers	\$16.88	\$27.52	\$40.84	\$47.54	\$56.72
17-2081	Environmental Engineers	\$26.43	\$32.48	\$38.82	\$48.95	\$56.14
17-3019	Drafters, All Other	\$16.78	\$20.01	\$23.73	\$30.75	\$38.02
17-2199	Validation Engineers	\$16.88	\$27.52	\$40.84	\$47.54	\$56.72

Data: EMSI, BLS  
Analysis: Workforce Intelligence Network



# Business & Finance

## Introduction

### Business & Finance

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.

### Postings Over Time

Washtenaw County employers posted 684 online job ads for Business & Finance occupations during Q2 2016. This is a slight 12% drop from the 775 job ads posted for these types of workers during Q1. Despite the drop this quarter, employer demand for Business & Finance occupations has been trending upward, quarter-to-quarter. Increased demand is correlated with growth in employment for these occupations in Washtenaw County.

### Employment Over Time

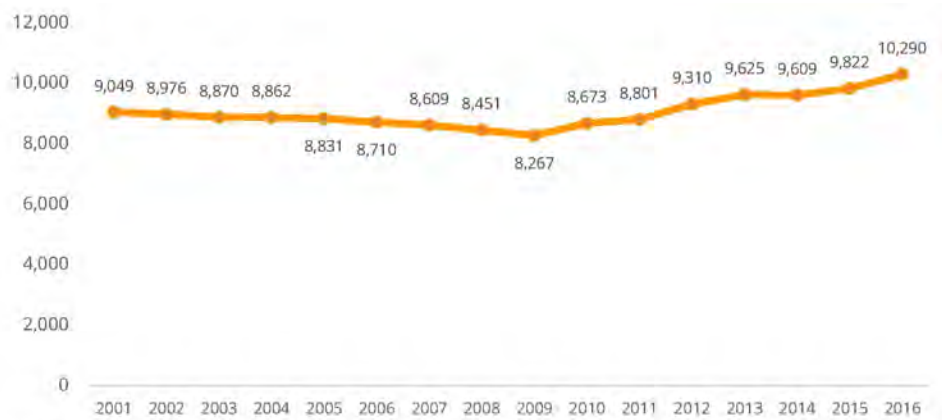
With the overall increase in demand for Business & Finance workers in Washtenaw County, employment has risen for this set of occupations. In 2016, 10,290 Washtenaw County workers are employed in a Business & Finance occupation. This occupation group has added 2,000 new jobs since the end of the recession in 2009.

### Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Employment Over Time



Data: EMSI, BLS  
Analysis: Workforce Intelligence Network

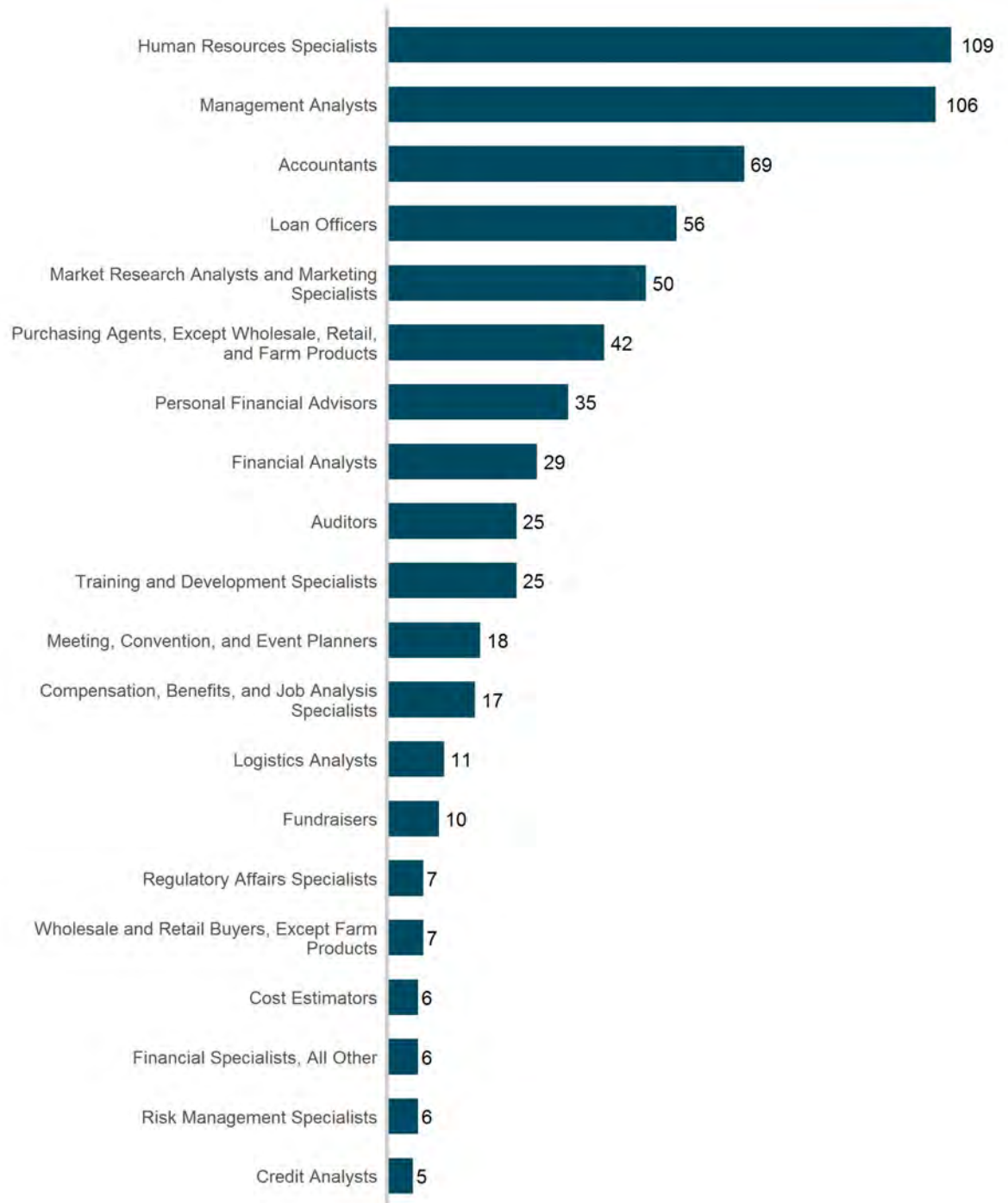


Now hiring: 684 Business & Finance job postings



10,000 Business & Finance employees

**Business & Finance**  
**Top Jobs**  
Quarter 2 2016





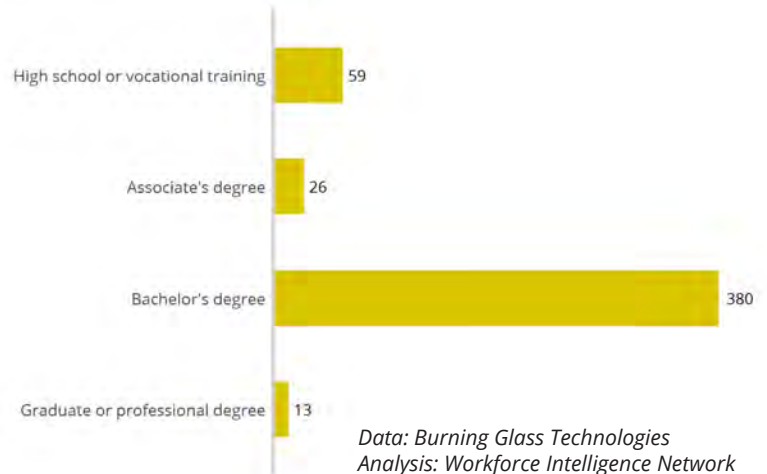
In-demand skills:  
accounting, budgeting

59%  
ads for full-time positions

### Business & Finance Educational Attainment & Experience Required

Seventy percent (478 postings) of Q2 Business & Finance job postings specified a desired level of educational attainment. Of those, the majority (380 postings) required job candidates to hold a bachelor's degree. A smaller share of job postings targeted jobseekers with just a high school diploma. Most Business & Finance job postings (366 postings) in Washtenaw County were aimed at jobseekers with fewer than five years of experience.

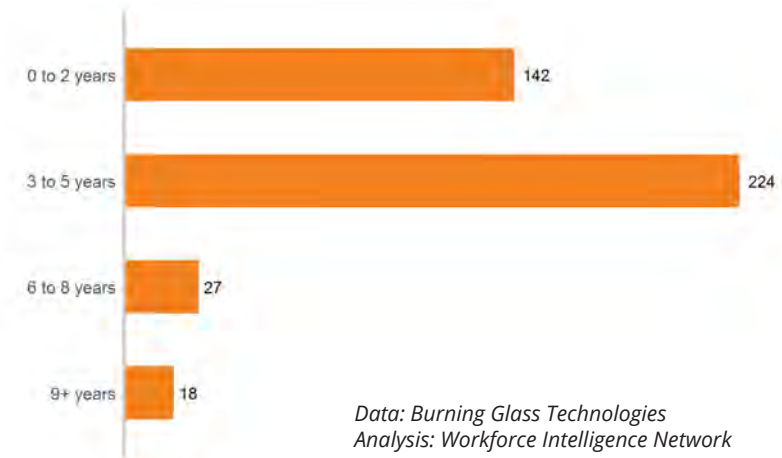
### Minimum Educational Attainment Required Q2 2016



### Areas of Study In-Demand Q2 2016

- Business administration and management
- Accounting
- Finance
- Human resources development
- Computer science

### Experience Required Q2 2016







Knowledge areas: accounting,  
human resources

\$59,291  
mean advertised salary

### Business & Finance In-Demand Skills Q2 2016

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 Q2 Business & Finance job postings.

#### In-Demand Technical Skills

- Customer service
- Accounting and budgeting
- Scheduling
- Project management
- Business analysis, business process

#### In-Demand Foundational Skills

- Communication skills
- Writing
- Computer skills: Microsoft Office
- Planning
- Problem solving

#### Job Type

- Temporary: 5.4%
- Full-Time: 58.6%
- Part-Time: 1.3%

#### Certifications In-Demand

- Certified Public Accountant (CPA)
- Project management (e.g. PMP)
- Series 7
- Certified financial planner
- Human resources (e.g. GPHR)





In-demand certifications:  
CPA, PMP, human resources

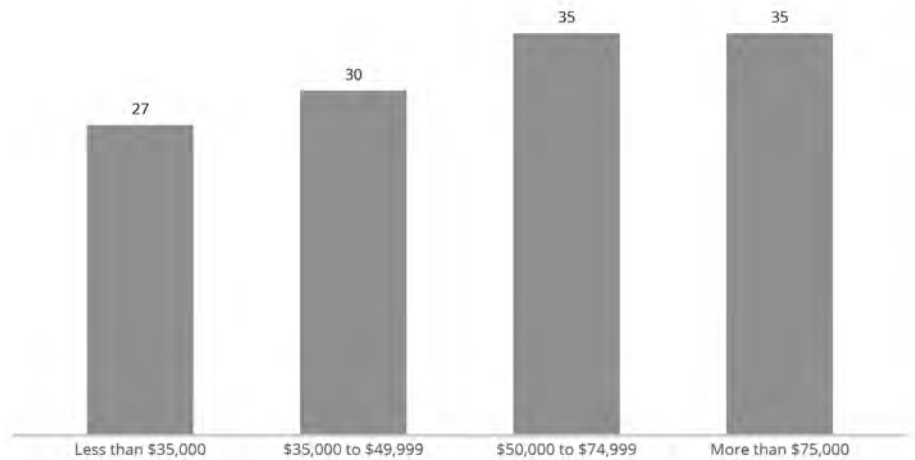


Education required:  
bachelor's degree

## Business & Finance Wages

Business & Finance occupations offer Washtenaw County workers a wide range of salaries. Just 127 of the 680 Business & Finance postings in the county during Q2 specified a wage or salary range – the distribution of those earnings can be seen in the chart to the right. Wage data from the Bureau of Labor Statistics show that seven out of the top ten in-demand Business & Finance jobs in the county make at least \$17 an hour at the median, or over \$35,000 a year.

## Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
13-1071	Human Resources Specialists	\$19.29	\$23.71	\$31.15	\$39.38	\$49.43
13-1111	Management Analysts	\$23.10	\$29.96	\$38.73	\$48.63	\$68.23
13-2011	Accountants	\$16.31	\$21.94	\$27.36	\$35.22	\$45.64
13-2072	Loan Officers	\$21.72	\$24.71	\$28.42	\$34.27	\$55.12
13-1161	Market Research Analysts and Marketing Specialists	\$17.66	\$22.39	\$29.91	\$41.99	\$56.60
13-1023	Purchasing Agents, Except Wholesale, Retail, and Farm Products	\$20.30	\$23.43	\$28.27	\$36.05	\$45.02
13-2052	Personal Financial Advisors	\$19.97	\$22.33	\$31.84	\$40.36	\$55.25
13-2051	Financial Analysts	\$20.22	\$24.67	\$30.57	\$36.92	\$47.67
13-2011	Auditors	\$16.31	\$21.94	\$27.36	\$35.22	\$45.64
13-1151	Training and Development Specialists	\$8.52	\$12.45	\$22.86	\$31.88	\$40.55

Data: EMSI, BLS  
Analysis: Workforce Intelligence Network

## Introduction

### Health Care

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.

### Postings Over Time

Employer demand for Health Care occupations has trended upward in Washtenaw County since the beginning of WIN's analysis period in Q1 2011. Postings for these occupations seem to have reached a steady level; Washtenaw County employers posted 1,614 in Q2 2016, 1,696 in Q1, and 1,692 in Q4 2015. The upward trajectory of employer demand has driven growth in employment for these occupations in Washtenaw County.

### Employment Over Time

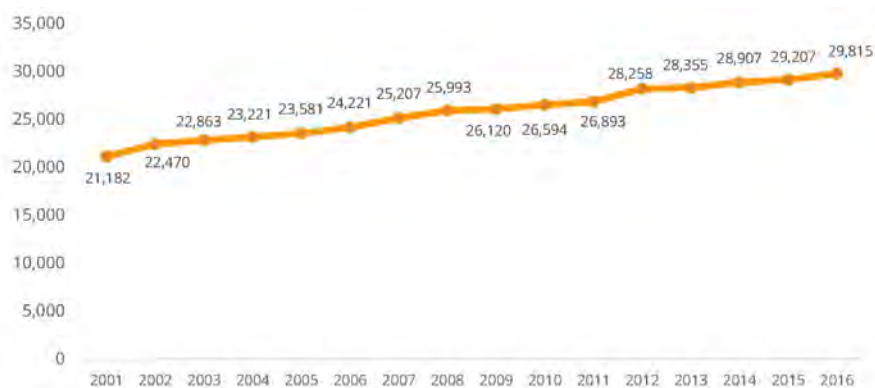
In 2016, 29,815 Washtenaw County workers are employed in Health Care occupations. Health Care employment was largely unaffected by the Great Recession and this occupation group adds a couple hundred jobs each year.

### Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Employment Over Time



Data: EMSI, BLS  
Analysis: Workforce Intelligence Network



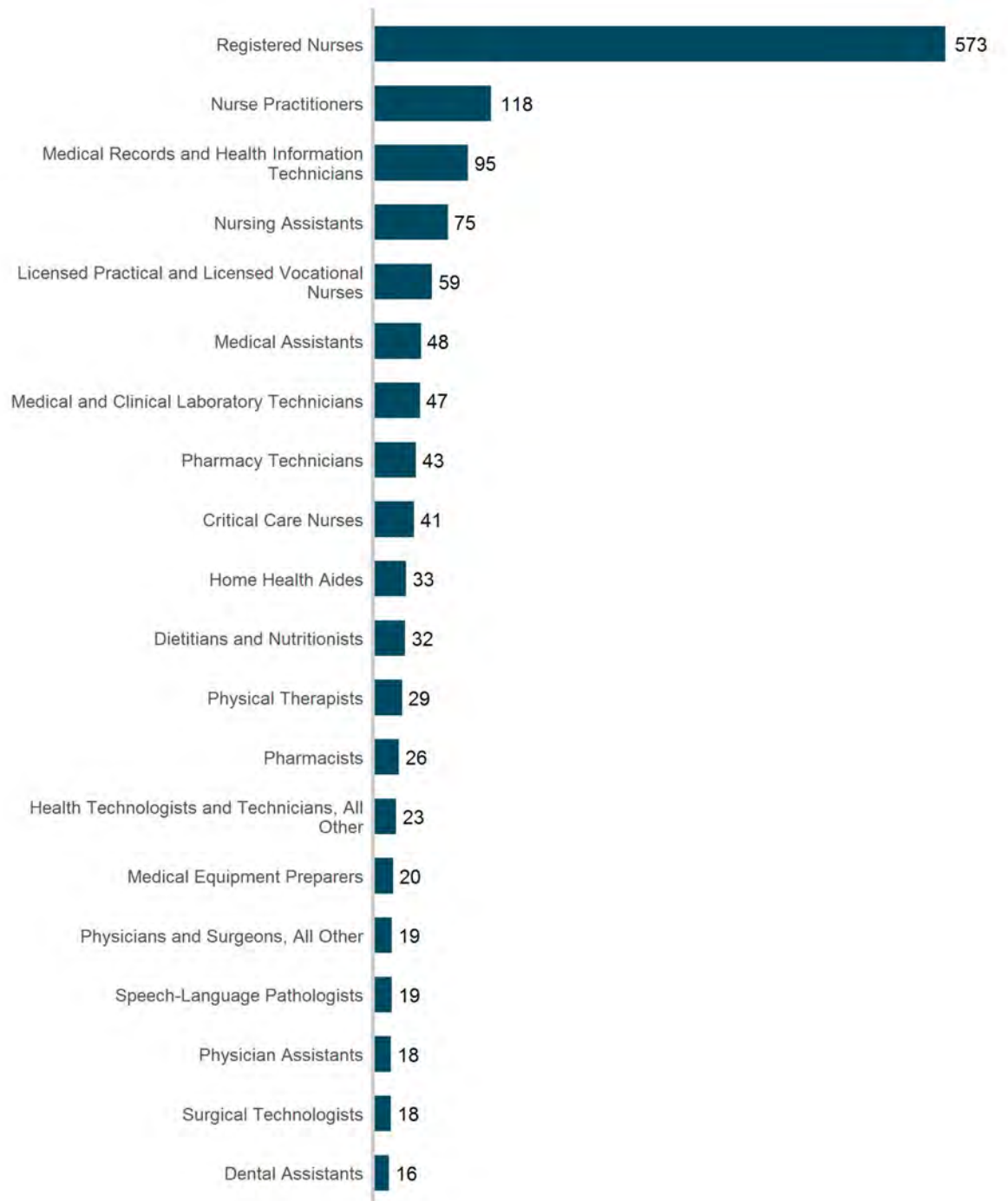
30,000 Health Care  
employees



Now hiring: 1,600 online  
job postings

### Health Care Top Jobs

Quarter 2 2016





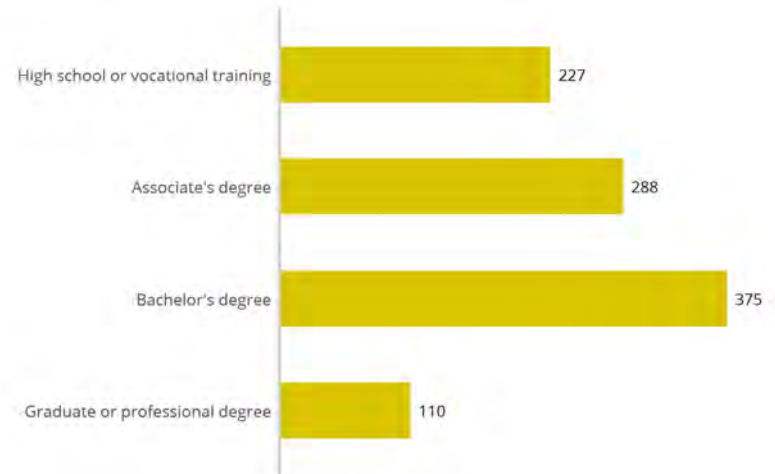
In-demand skills: patient care, collective bargaining

\$68,000  
median annual salary for RN

### Health Care Educational Attainment & Experience Required

Because occupations like registered nurses and medical assistants are some of the most in-demand Health Care jobs in Washtenaw County, many Q2 job postings required a high school diploma and some training or an associate's degree. Many employers, however, prefer nurses with bachelor's degrees (375 postings) and high demand occupations like nurse practitioners, speech-language pathologists, and physician assistants require higher educational attainment (110 postings for workers with graduate degrees). Most (819 postings) Health Care positions open in Washtenaw County during Q2 were targeting workers with less than 5 years of experience.

### Minimum Educational Attainment Required Q2 2016

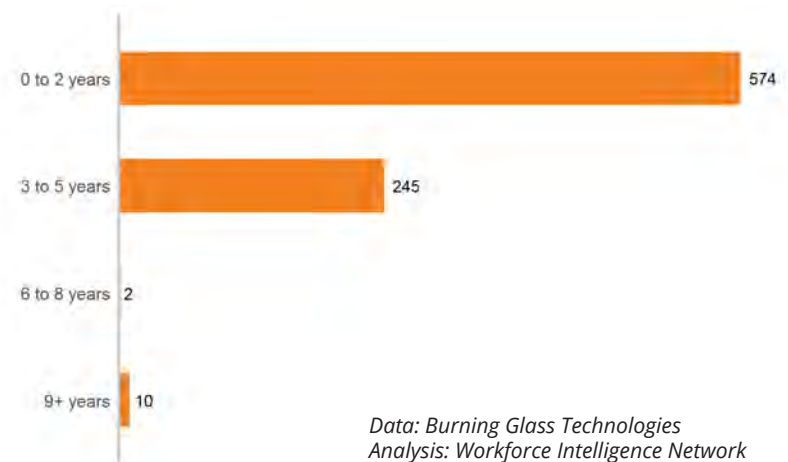


Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Areas of Study In-Demand Q2 2016

- Nursing science
- Physical therapy
- Public health
- Business administration and management
- Law

### Experience Required Q2 2016



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network



Knowledge areas:  
nursing, public health, law

62%  
ads for full-time positions

### Health Care in-Demand Skills Q2 2016

Washtenaw County employers looking to hire Health Care workers in Q2 2016 sought basic skills like communication, teamwork, and writing and research as prerequisites for employment. Some of the more technical skills in-demand in Q2 job postings included treatment planning, patient care, and scheduling. Some in-demand health care occupations in Washtenaw during Q2 required knowledge of or experience in collective bargaining.

#### In-Demand Technical Skills

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

#### In-Demand Foundational Skills

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

#### Job Type

- Temporary: 10.4%
- Full-Time: 61.7%
- Part-Time: 8.2%

#### Certifications In-Demand

- Registered nurse (RN)
- Nurse practitioner
- Advanced Cardiac Life Support (ACLS) certification
- Nursing specialty certification
- First Aid CPR AED



Education required:  
associate's, bachelor's degree

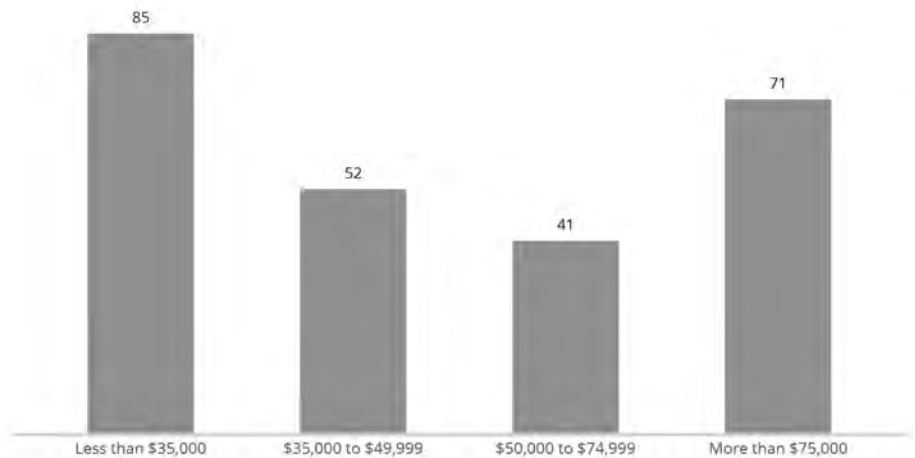


In-demand certifications:  
RN, ACLS, CPR

## Health Care Wages

Only 249 of the 1,614 Health Care job postings for Q2 advertised a salary range. The distribution of those advertised salaries can be seen in the chart to the right. Data from the Bureau of Labor Statistics show that a job in Health Care, like as a registered nurse, can pay \$33 per hour at the median, over \$68,000 annually, for a position that typically requires just a two-year degree. The highest paid of the in-demand occupations are jobs that require higher educational attainment like nurse practitioners and speech-language pathologists.

## Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Wage Data from Bureau of Labor Statistics 2015

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	\$24.80	\$27.92	\$33.31	\$38.73	\$43.98
29-1171	Nurse Practitioners	\$34.52	\$39.13	\$44.08	\$50.83	\$56.26
29-2071	Medical Records and Health Information Technicians	\$14.71	\$18.05	\$23.38	\$27.68	\$30.55
31-1014	Nursing Assistants	\$10.19	\$12.29	\$14.15	\$16.60	\$18.35
29-2061	Licensed Practical and Licensed Vocational Nurses	\$17.67	\$20.03	\$22.45	\$25.51	\$28.29
31-9092	Medical Assistants	\$11.76	\$12.98	\$15.08	\$18.28	\$22.11
29-2012	Medical and Clinical Laboratory Technicians	\$9.02	\$10.72	\$14.18	\$18.91	\$30.41
29-2052	Pharmacy Technicians	\$8.99	\$11.04	\$14.93	\$17.80	\$20.27
29-1141	Critical Care Nurses	\$24.80	\$27.92	\$33.31	\$38.73	\$43.98
31-1011	Home Health Aides	\$8.33	\$9.55	\$10.56	\$11.57	\$13.84

Data: EMSI, BLS  
Analysis: Workforce Intelligence Network



# Information Technology (IT)

## Introduction

### Information Technology(T)

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.

### Postings Over Time

Employer demand for workers in Information Technology (IT) occupations has generally grown in Washtenaw County over the analysis period from Q1 2011 to present. In Q2 2016 employers posted 1,499 online job ads for IT workers, down 7% from the 1,606 ads seen in Q1. The general growth in employer demand for IT workers in Washtenaw County has driven employment growth.

### Employment Over Time

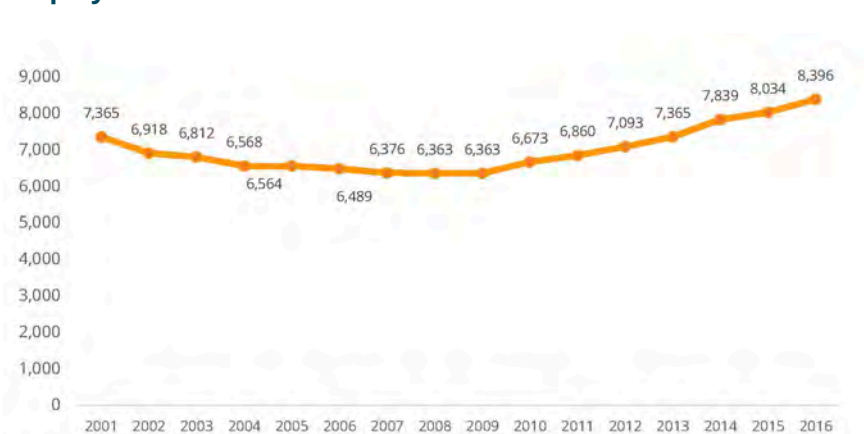
Increased employer demand in Information Technology occupations in Washtenaw County has driven growth in employment. In 2016, 8,936 Washtenaw County workers are employed in IT occupations. 2013 employment surpassed pre-recession employment numbers from 2001 when 7,365 workers held IT jobs.

### Online Job Postings



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

### Employment Over Time



Data: EMSI, BLS  
Analysis: Workforce Intelligence Network



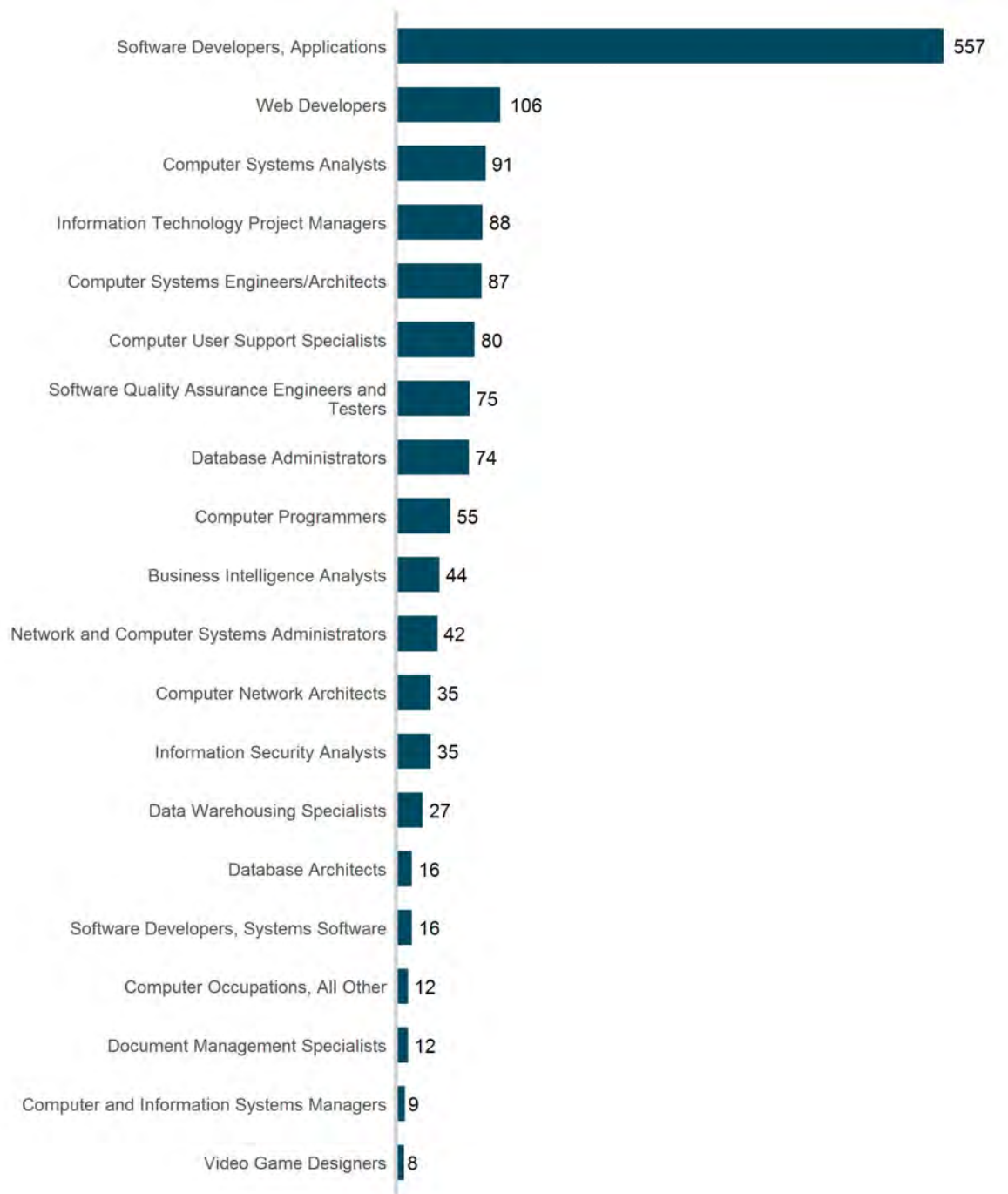
Now hiring: 1,500 Information  
Technology job ads



9,000 Information  
Technology employees

### Information Technology (IT) Top Jobs

Quarter 2 2016







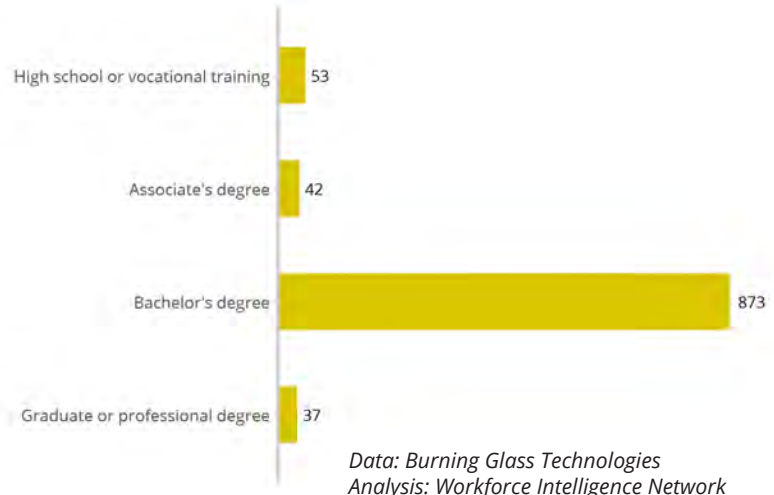
In-demand skills:  
SQL, Java, Python, C++

\$83,861  
mean advertised salary

### Information Technology (IT) Educational Attainment & Experience Required

Data from Q2 2016 online job postings show that most Information Technology positions in Washtenaw County require a bachelor's degree (873 postings). During Q2 there were still many IT positions open to workers with an associate's degree (42 postings) or who had undertaken some short-term training (53 postings). The majority of postings (763 postings) during Q1 2016 targeted Washtenaw County workers with fewer than 5 years of experience.

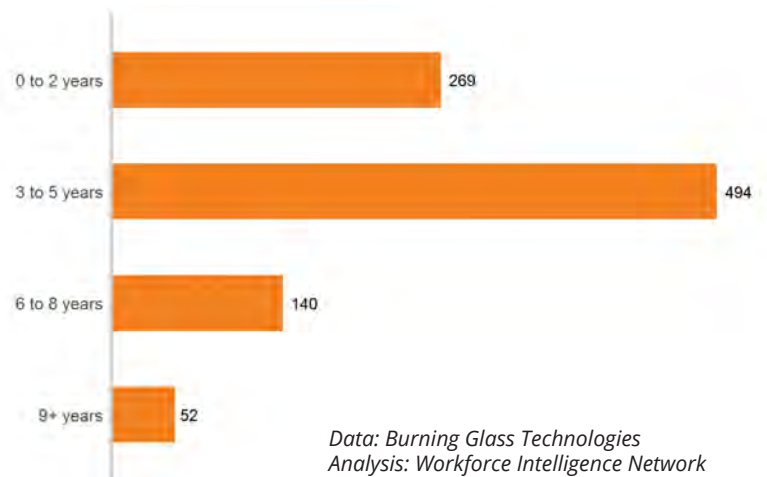
### Minimum Educational Attainment Required Q2 2016



### Areas of Study In-Demand Q2 2016: 2016

- Computer science
- Engineering, general
- Business administration and management
- Electrical and electronic engineering
- Information technology

### Experience Required Q2 2016: 2016





In-demand certifications:  
PMP, CISSP, CCIE

60%  
ads for full-time positions

### Information Technology (IT) In-Demand Skills Q2 2016Q1 2016

Good communication skills and the ability to collaborate and work on a team are foundational skills for employment in Information Technology occupations in Washtenaw County. During Q2 2016, 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.

#### In-Demand Technical Skills

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

#### In-Demand Foundational Skills

- Communication skills
- Writing and research
- Problem solving, troubleshooting
- Teamwork/collaboration
- Quality assurance and control

#### Job Type

- Temporary: 5.9%
- Full-Time: 59.8%
- Part-Time: 2.5%

#### Certifications In-Demand

- Project management (e.g. PMP)
- Certified Information Systems Security Professional (CISSP)
- CISCO Certified Internetwork Expert (CCIE)
- IT Infrastructure Library
- Certified A+ Technician



Education required:  
bachelor's degree

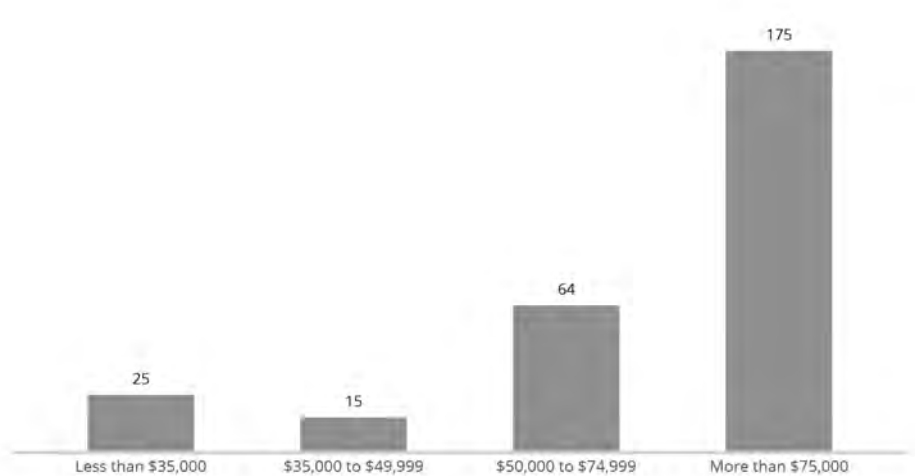


Knowledge areas: computer  
science, business

## Information Technology (IT) Wages

Information Technology occupations are some of the highest paying for Washtenaw County workers. Of the 279 Q1 job postings that advertised a wage or salary, 175 offered annual earnings greater than \$75,000. Wage data from the Bureau of Labor Statistics show that median wages for many in-demand IT jobs in Washtenaw County top \$35 an hour, or over \$72,000 annually.

## Advertised Salaries Quarter 2 2016



Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

## Wage Data from Bureau of Labor Statistics 201515

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1132	Software Developers, Applications	\$25.51	\$31.17	\$36.52	\$45.14	\$54.14
15-1134	Web Developers	\$14.63	\$20.50	\$27.37	\$35.16	\$42.67
15-1121	Computer Systems Analysts	\$18.78	\$28.85	\$40.25	\$49.81	\$56.17
15-1199	Information Technology Project Managers	\$20.29	\$26.86	\$35.38	\$44.42	\$51.48
15-1199	Computer Systems Engineers/Architects	\$20.29	\$26.86	\$35.38	\$44.42	\$51.48
15-1151	Computer User Support Specialists	\$10.05	\$12.82	\$18.80	\$25.36	\$32.69
15-1199	Software Quality Assurance Engineers and Testers	\$20.29	\$26.86	\$35.38	\$44.42	\$51.48
15-1141	Database Administrators	\$26.78	\$31.86	\$39.58	\$45.96	\$53.87
15-1131	Computer Programmers	\$19.57	\$24.05	\$33.60	\$42.02	\$47.48
15-1199	Business Intelligence Analysts	\$20.29	\$26.86	\$35.38	\$44.42	\$51.48

Data: EMSI, BLS  
Analysis: Workforce Intelligence Network

### Annual Labor Market Data

	2010 Annual	2011 Annual	2012 Annual	2013 Annual	2014 Annual	2015 Annual	2016 to- date (through May 2016)	Change from 2015	Percent Change from 2015
Labor Force	182,801	180,796	182,072	185,236	188,116	189,852	<b>197,420</b>	7,567	4.0%
Employment	167,969	168,467	171,208	174,393	178,965	183,151	<b>191,638</b>	8,487	4.6%
Unemployment	14,832	12,330	10,863	10,843	9,152	6,701	<b>5,781</b>	-920	-13.7%
Unemployment Rate	8.1%	6.8%	6.0%	5.9%	4.9%	3.5%	<b>2.9%</b>	-0.6%	na

*\*Note: Monthly data averaged by year*

Data: Bureau of Labor Statistics

### Quarterly Labor Market Data

	2nd Quarter 2015	3rd Quarter 2015	4th Quarter 2015	1st Quarter 2016	2nd Quarter 2016 (through May 2016)	Change from 1st Quarter 2016	Percent Change from 1st Quarter 2016
Labor Force	190,783	186,826	193,014	196,210	<b>199,234</b>	3,024	1.5%
Employment	183,322	179,849	187,743	190,495	<b>193,353</b>	2,858	1.5%
Unemployment	7,461	6,977	5,271	5,715	<b>5,881</b>	166	2.9%
Unemployment Rate	3.9%	3.7%	2.7%	2.9%	<b>3.0%</b>	0.0%	na

*\*Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics










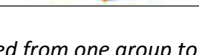


### Monthly Labor Market Data

	March 2015	April 2015	May 2015	June 2015	July 2015	August 2015	Septembe r 2015	October 2015	November 2015	December 2015	January 2016	February 2016	March 2016	April 2016	May 2016
Labor Force	189,736	190,682	192,223	189,444	188,567	186,573	185,338	192,346	193,420	193,276	192,793	197,515	198,322	198,322	198,322
Employment	182,965	184,429	184,114	181,423	179,781	180,173	179,592	186,605	188,272	188,353	187,258	191,825	192,403	192,403	192,403
Unemployment	6,771	6,253	8,109	8,021	8,786	6,400	5,746	5,741	5,148	4,923	5,535	5,690	5,919	5,919	5,919
Unemployment Rate	3.6%	3.3%	4.2%	4.2%	4.7%	3.4%	3.1%	3.0%	2.7%	2.5%	2.9%	2.9%	3.0%	3.0%	3.0%

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


















Data: Bureau of Labor Statistics

# Washtenaw County Job Posting Data by Occupation Group\* Over Time

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
Total Postings	11,192	11,812	10,540	11,951	11,020		-1.5%	-7.8%
Agriculture	183	186	163	223	197		7.7%	-11.7%
Business & finance	781	824	592	775	684		-12.4%	-11.7%
Construction	80	111	80	146	132		65.0%	-9.6%
Customer service	2,101	2,361	2,057	2,577	2,255		7.3%	-12.5%
Education	327	255	259	194	259		-20.8%	33.5%
Energy	3	5	5	4	4		33.3%	0.0%
Engineers & designers	480	516	469	512	480		0.0%	-6.3%
Health care	1,692	1,737	1,692	1,696	1,614		-4.6%	-4.8%
Information technology	1,554	1,749	1,446	1,606	1,499		-3.5%	-6.7%
Skilled trades & technicians	309	198	298	387	286		-7.4%	-26.1%
Transportation, distribution, and logistics	691	515	477	491	646		-6.5%	31.6%

*\*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.*

## Total Job Postings: WIN Partnership

	Q2 2015	Q3 2015	Q4 2015	Q1 2016	Q2 2016	Share of Q2 2016 Total	Change Over Time	Annual Change Q2 2015-Q2 2016	Quarter Growth Q1 2016-Q2 2016
WIN-Region Total	129,794	140,225	126,959	143,199	139,765	100.0%		7.7%	-2.4%
Detroit	27,742	30,426	27,966	29,296	28,456	20.5%		2.6%	-2.9%
Genesee & Shiawassee	5,071	5,465	4,721	5,711	5,631	4.0%		11.0%	-1.4%
Hillsdale & Lenawee	1,495	1,467	1,580	1,678	1,606	1.2%		7.4%	-4.3%
Jackson	2,415	2,373	2,099	2,557	2,181	1.8%		-9.7%	-14.7%
Livingston	2,151	2,274	2,048	2,472	2,162	1.7%		0.5%	-12.5%
Macomb	13,586	14,136	12,658	14,754	14,257	10.3%		4.9%	-3.4%
Monroe	1,871	1,778	1,662	1,841	1,694	1.3%		-9.5%	-8.0%
Oakland	40,219	44,474	39,030	45,418	43,058	31.7%		7.1%	-5.2%
St. Clair	1,807	1,697	1,461	1,730	1,788	1.2%		-1.1%	3.4%
Thumb Area	1,208	1,199	1,561	1,673	1,598	1.2%		32.3%	-4.5%
Washtenaw	11,192	11,812	10,540	11,951	11,020	8.3%		-1.5%	-7.8%
Wayne	50,930	55,824	51,993	55,886	54,770	39.0%		7.5%	-2.0%
Outer Wayne	23,188	25,398	24,027	26,590	26,314	18.6%		13.5%	-1.0%
Prosperity Region 6	8,086	8,361	7,743	9,114	9,017	6.4%		11.5%	-1.1%
Prosperity Region 9	19,124	19,704	17,929	20,499	18,663	14.3%		-2.4%	-9.0%
Prosperity Region 10	104,735	114,434	103,681	116,058	112,085	81.0%		7.0%	-3.4%

Data: Burning Glass Technologies  
Analysis: Workforce Intelligence Network

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