

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:

- Business & Finance (Page 7)
- Engineers & designers (manufacturing focused) (page 12)
- Health Care (page 17)
- Information technology (page 22)
- Skilled Trades (Manufacturing focused) (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 demand stabilizes around 11,000 postings.

Over the past 5 years, employer demand has witnessed an upward trend. Postings have doubled from 5,500 postings in Q1 2011 to 11,000 postings in Q3 2016. In the past 3 years, postings have started to stabilize around 11,000 postings, with 2016 in particular showing that employer demand remains strong.

2. 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 of Washtenaw county makes a median annual salary of \$69,000, while software developers (the third most in-demand job) makes a median salary of \$76,000. With these jobs in high demand, they present a great opportunity for job seekers.

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

All of the occupation group analyzed within this report all showed a majority of postings desiring workers with less than 5 years of experience. While the occupation groups, Business and Finance, Information Technology, and Engineers and Designers sought mainly applicants with 3 to 5 years of experience, many entry level postings were reported in Q3 for these groups. Health Care and Skilled Trades employers mainly desired those with 0 to 2 years experience or entry level applicants. Washtenaw County provides many entry level opportunities for those looking to change careers or enter the labor force.

4. Labor market witnesses small drop during third quarter of 2016.

During the recent quarter labor force participation fell by 1.6%. The amount of workers in Washtenaw county also fell at 2.1%. With employment falling further than the labor force unemployment increased by about 0.4% (See page 4 for details).

5. Demand for Health Care workers reaches new relative peak.

Demand for Health Care related occupations has been steadily increasing after a drop during the second half of 2013. Recently there have been 1,778 job postings related to this occupation group, the highest amount of online advertisements within a 5-year span. Demand could strengthen even more if this trend continues past 2016. (See page xx for details).



Executive Summary

Postings over time

Total online job postings by employers in Washtenaw during Q3 2016 rose 2%, from 11,020 in Q2 to 11,232. Employer demand fluctuates quarter to quarter and the overall all trend for demand in Washtenaw County is upward.

WIN Region Online Job Postings



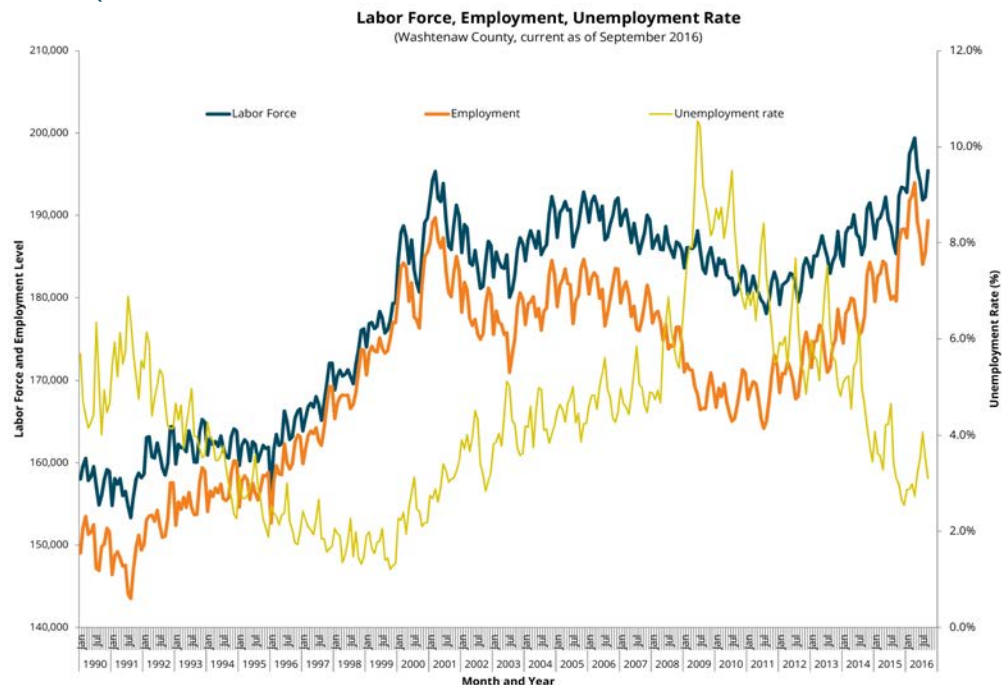
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Labor force/employment/unemployment

The Washtenaw County labor force fell by 3,212 workers from Q2 to Q3 2016, a 1.6% decrease to 193,177 workers in the market during Q3. Employment fell at a similar rate, 2.1%, between quarters to 186,303 employees, boosting the quarterly unemployment rate 0.4% to 3.6%. Employment in Washtenaw County annually has grown 3.2% 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 22,000 jobs during the same time period.

Labor Force, Employment, Unemployment Rate

Quarter 3 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

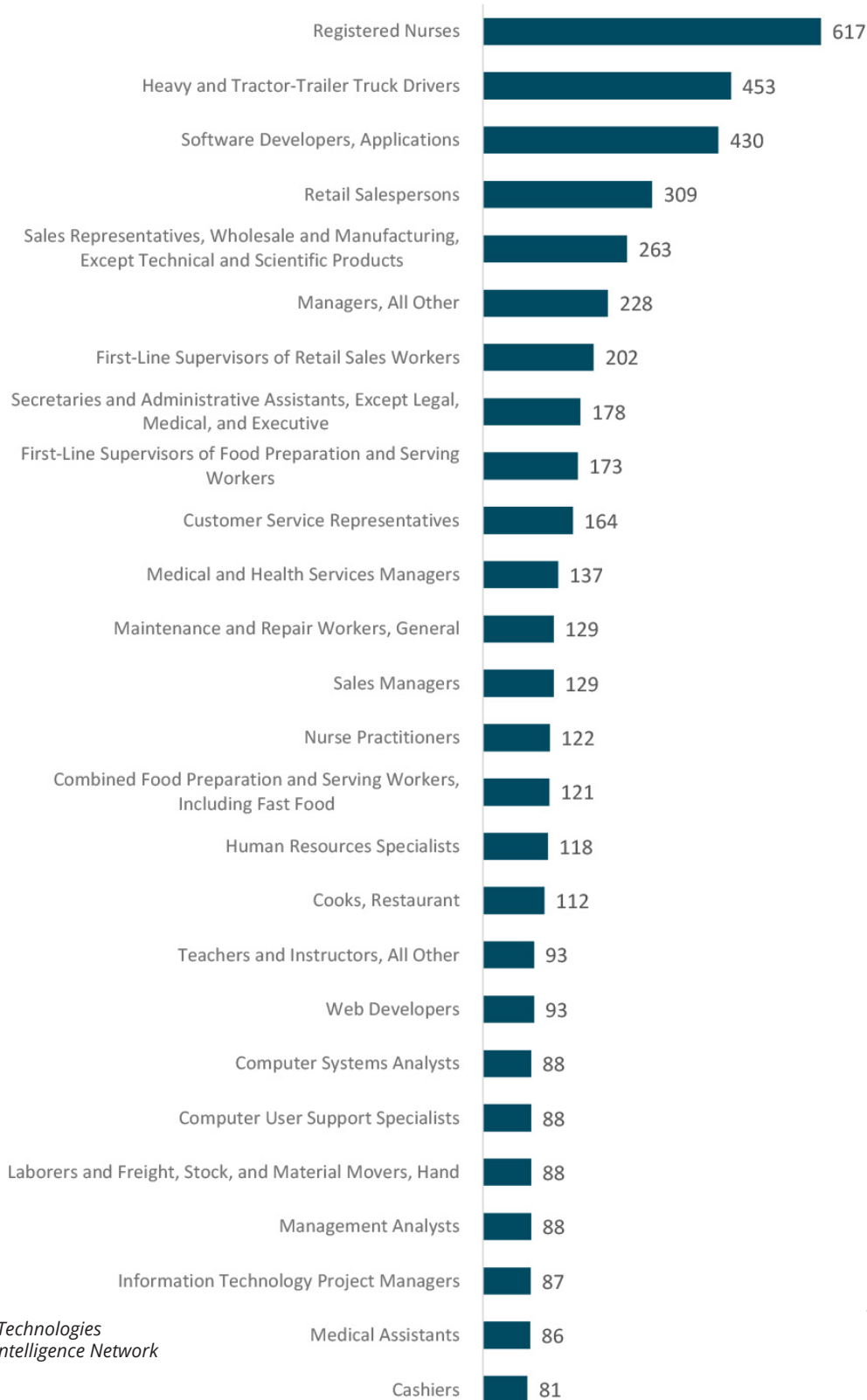


3.2% annual growth in
employment



3.6% quarterly unemployment
rate

Top Jobs Quarter 3 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



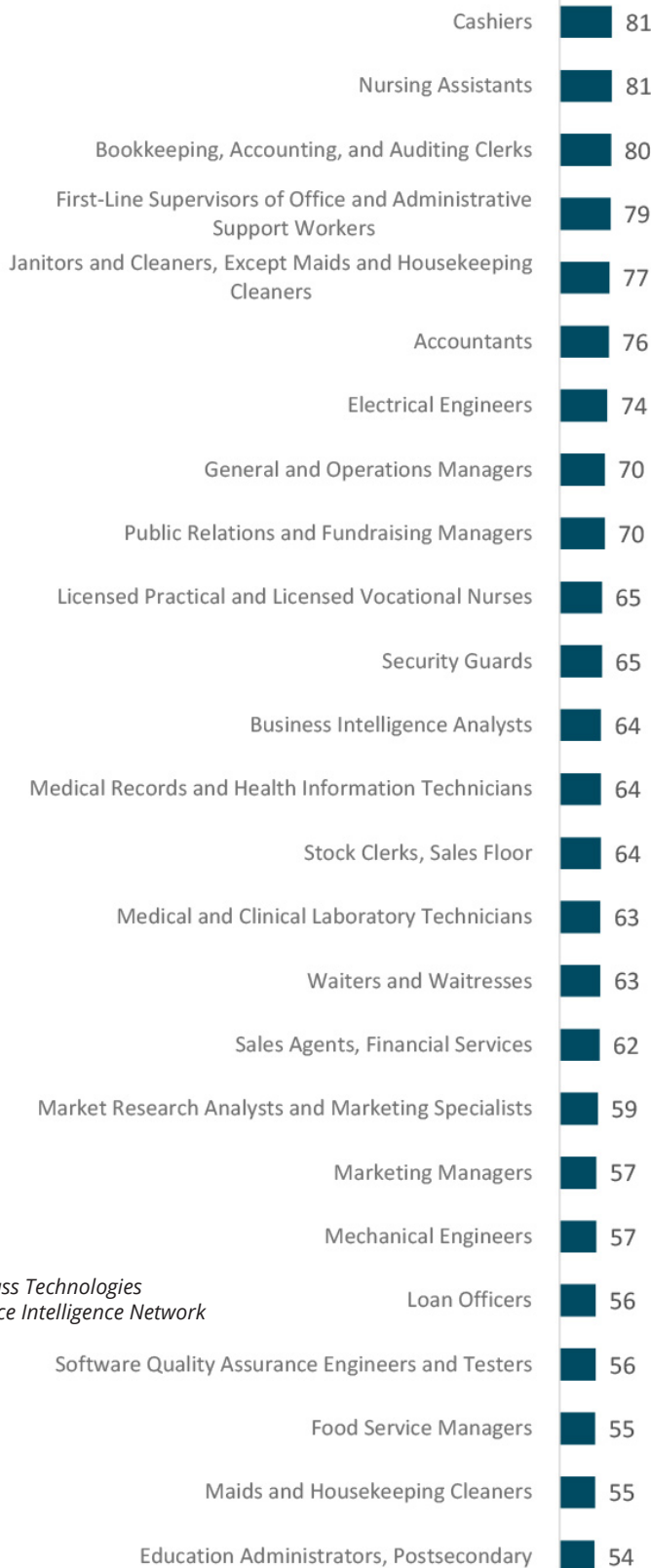
Now hiring: 11,000 job
postings



Most in-demand: registered
nurses, truck drivers

Top Jobs

Quarter 3 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Business & Finance

Introduction

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.

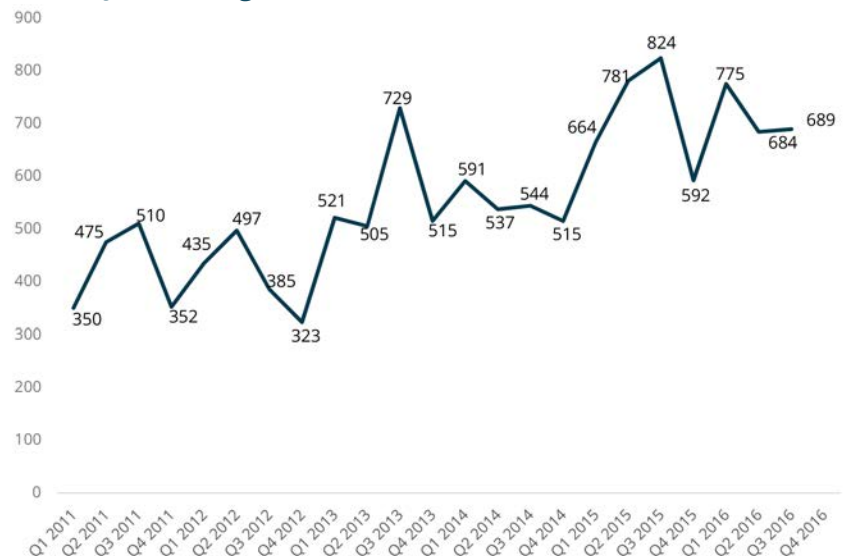
Job Posting Analysis

Washtenaw County employers posted 689 online job ads for Business & Finance occupations during Q3 2016. This is a slight 1% increase from the 684 job ads posted for these types of workers during Q2. Employer demand for Business & Finance occupations continues trending upward, quarter-to-quarter. Increased demand is correlated with growth in employment for these occupations in Washtenaw County.

Employment Analysis

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.

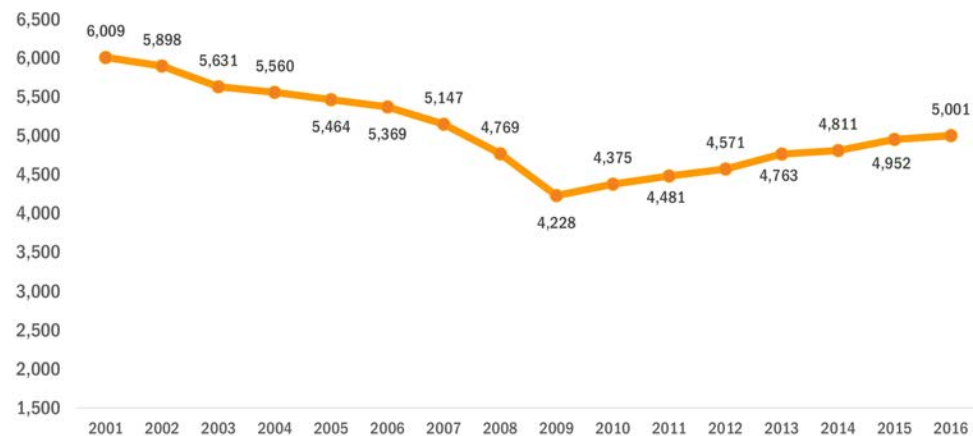
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI
Analysis: Workforce Intelligence Network

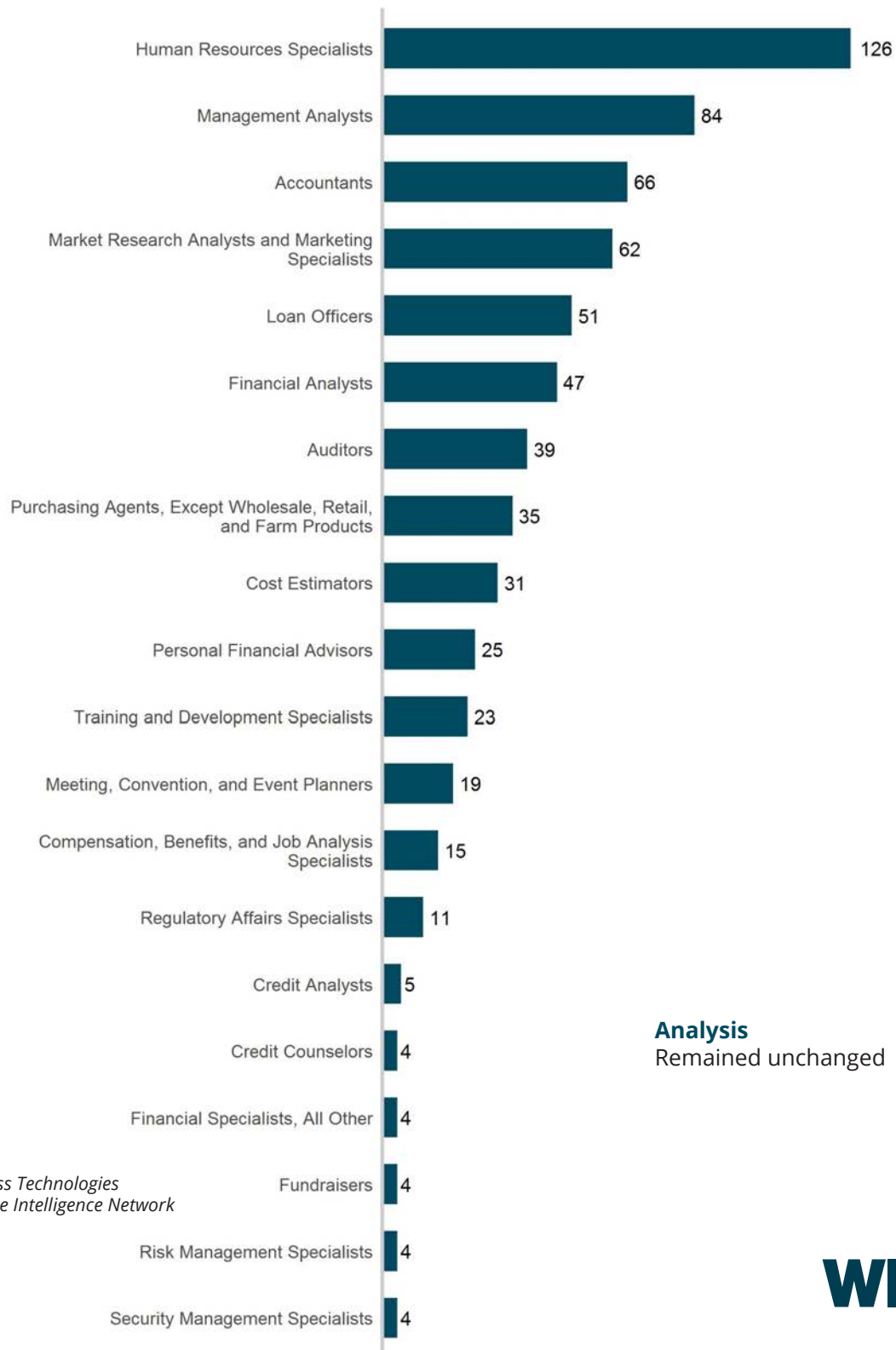


10,000 Business & Finance
employees



Now hiring: 689 Business &
Finance job postings

Business & Finance
Top Jobs
Quarter 3 2016



Analysis
Remained unchanged

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



In-demand skills: Computer skills, accounting, budgeting

%

63% ads for full-time positions

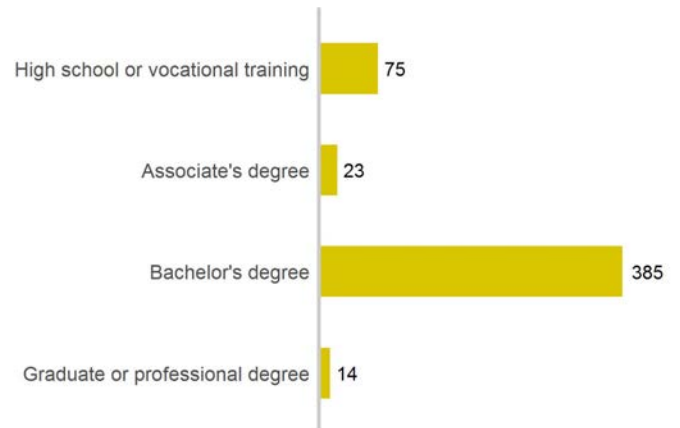
Business & Finance Educational Attainment Required

Seventy percent (497 postings) of Q3 Business & Finance job postings specified a desired level of educational attainment. Of those, the majority (385 postings) required job candidates to hold a bachelor's degree. A smaller share of job postings (75 postings) targeted jobseekers with just a high school diploma. Most Business & Finance job postings (398 postings) in Washtenaw County were aimed at jobseekers with fewer than five years of experience. 44% of these postings (174 postings) were available to entry level workers with 0 to 2 years of experience.

Degrees and Certifications Required

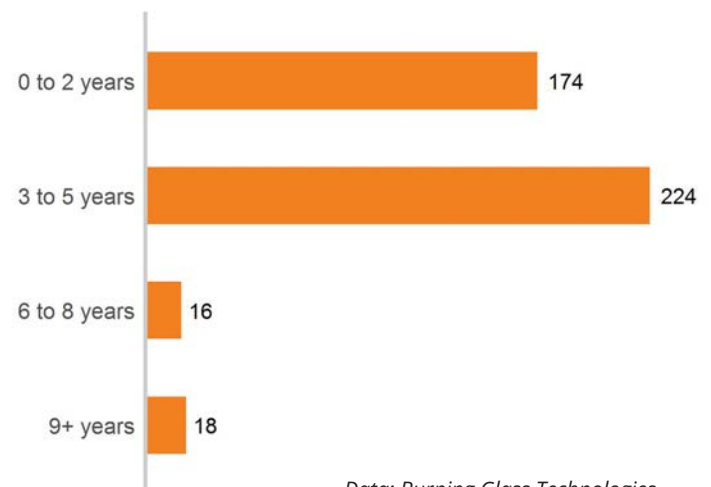
- Business Administration and Management, General
- Accounting
- Finance, General
- Engineering, General
- Human Resources Development

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Mean advertised salary:
\$62,4361

%

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 Q3 Business & Finance job postings.

Technical in-Demand Skills

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

Foundational In-Demand Skills

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

Job Type

- Temporary: 4.9%
- Full-Time: 63.3%
- Part-Time: 1.0%

Certifications Required

- Certified Public Accountant (CPA)
- Series 7
- Insurance License
- Certified Financial Planner
- Professional in Human Resources



In-demand certifications: CPA, Series 7



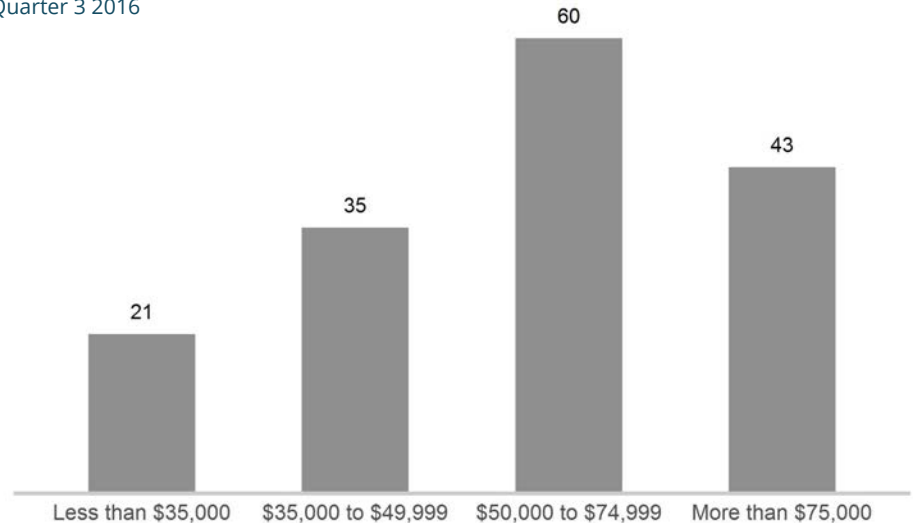
Education required: bachelor's degree

Business & Finance Wages

Business & Finance occupations offer Washtenaw County workers a wide range of salaries. Just 159 of the 689 Business & Finance postings in the county during Q3 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 \$24 an hour at the median, or over \$50,000 a year.

Advertised Wages in Job Postings

Quarter 3 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 |
| 13-1161 | Market Research Analysts and Marketing Specialists | \$17.66 | \$22.39 | \$29.91 | \$41.99 | \$56.60 |
| 13-2072 | Loan Officers | \$21.72 | \$24.71 | \$28.42 | \$34.27 | \$55.12 |
| 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 |
| 13-1023 | Purchasing Agents, Except Wholesale, Retail, and Farm Products | \$20.30 | \$23.43 | \$28.27 | \$36.05 | \$45.02 |
| 13-1051 | Cost Estimators | \$16.51 | \$19.84 | \$24.75 | \$36.82 | \$48.09 |
| 13-2052 | Personal Financial Advisors | \$19.97 | \$22.33 | \$31.84 | \$40.36 | \$55.25 |

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.

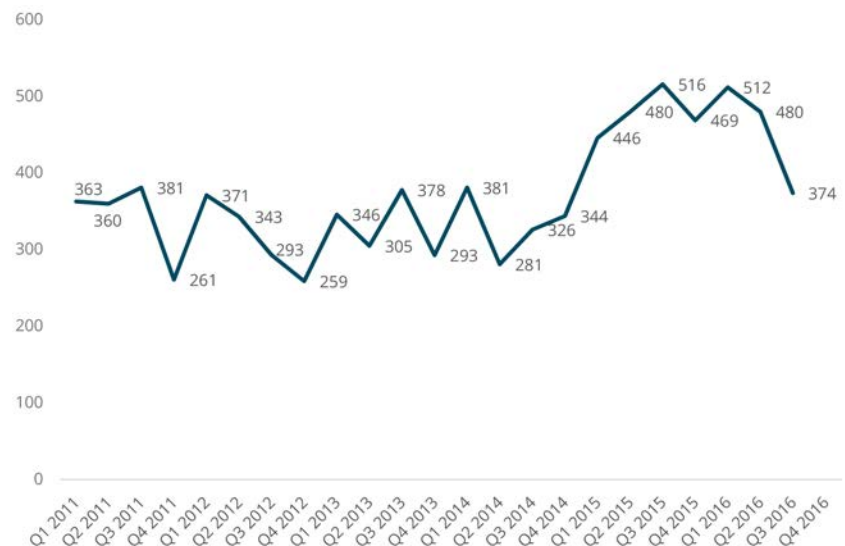
Job Posting Analysis

Washtenaw County employers posted 374 online job ads for advanced manufacturing-focused Engineers & Designers during Q3 2016. This is the second consecutive quarter of decreased postings, dropping 22.1% from 408 job postings in Q2 2016. During 2015 postings jumped from the low 300s to the high 400s, but has seen recent decrease in postings back to the pre 2015 average.

Employment Analysis

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.

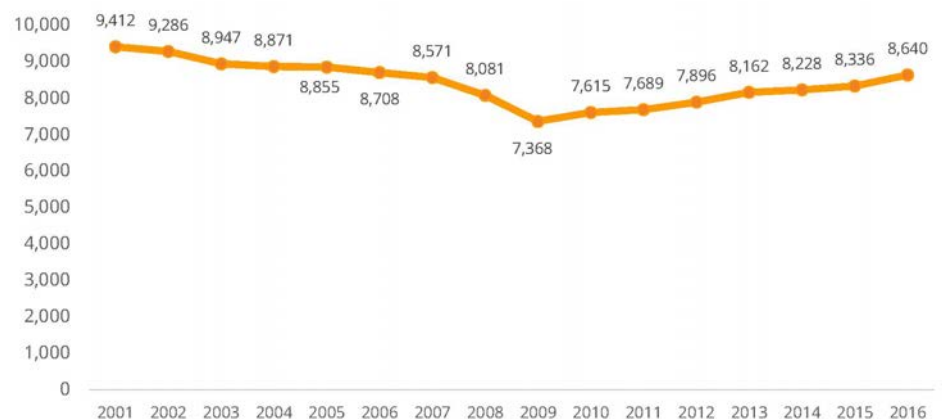
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI
Analysis: Workforce Intelligence Network



Now hiring: 374 Engineering & Design job postings

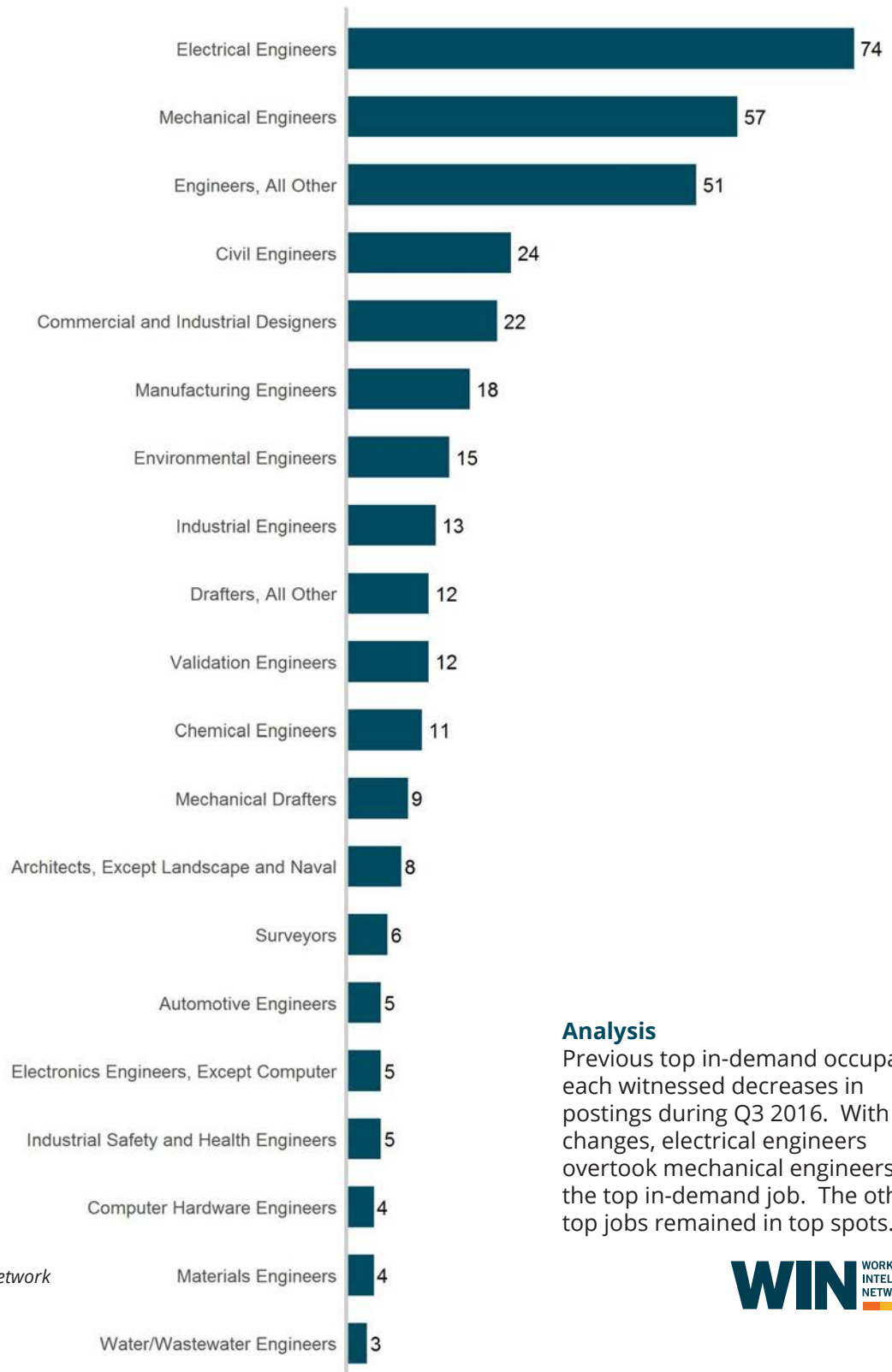


9,000 Engineering & Design employees

Engineers & Designers

Top Jobs

Quarter 3 2016



Analysis

Previous top in-demand occupations each witnessed decreases in postings during Q3 2016. With these changes, electrical engineers overtook mechanical engineers as the top in-demand job. The other top jobs remained in top spots.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Education required: bachelor's degree

%

In-demand skills: AutoCAD, Writing and Research

Engineers & Designers Educational Attainment Required

Workers in Engineering & Design occupations are generally required to hold bachelor's degrees. Job postings data from Q3 2016 show that 249 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 (9 postings). The majority of Engineering & Design job postings in Washtenaw County during Q1 2016 were targeting workers with less than 5 years of experience, with 76 postings seeking entry level applicants with 0 to 2 years of experience.

Degrees and Certifications Required

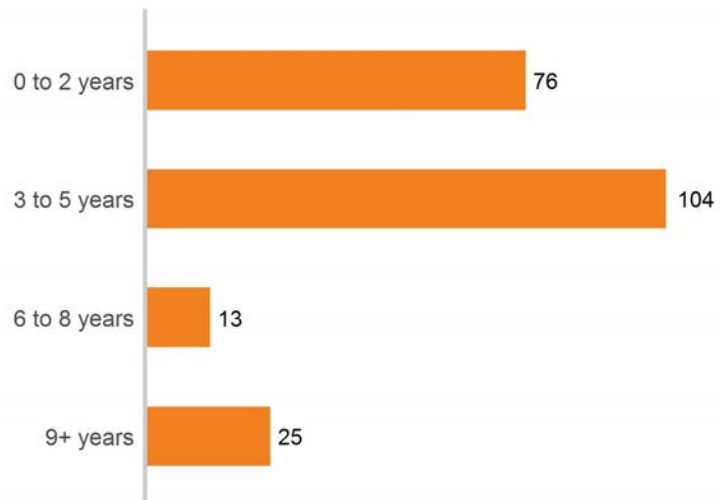
- Engineering, General
- Mechanical Engineering
- Electrical and Electronic Engineering Technologies/Technicians, Other
- Computer Science
- Business Administration and Management, General

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Mean advertised salary:
\$76,087

%

In-demand certifications: ABET,
NIST

Engineers & Designers in-Demand Skills

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Technical in-Demand Skills

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

Foundational In-Demand Skills

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

Job Type

- Temporary: 5.9%
- Full-Time: 56.4%
- Part-Time: Data Not Available

Certifications Required

- American Board for Engineering and Technology (ABET) Accredited
- Professional Engineer
- Engineer in Training Certification
- Certified Quality Engineer
- National Institute of Standards and Technology (NIST)



Knowledge areas: mechanical,
electrical engineering



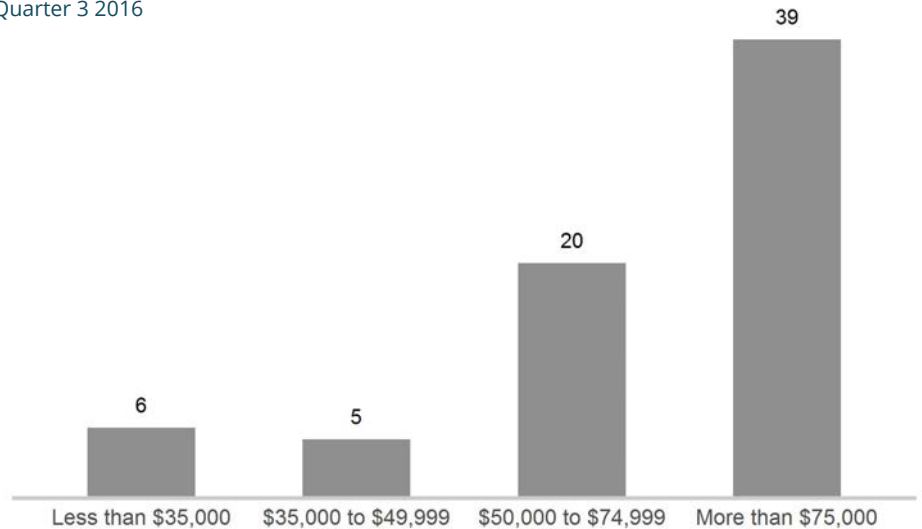
56% ads for full-time positions

Engineers & Designers Wages

Advanced manufacturing Engineering & Design occupations are some of the highest paying in Washtenaw County and throughout southeast Michigan. Seventy Q3 job postings specified a wage or salary range, and of those that did, 39 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 Wages in Job Postings

Quarter 3 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 |
|-----------------|-------------------------------------|-----------------------|-----------------------|--------------|-----------------------|-----------------------|
| 17-2071 | Electrical Engineers | \$32.25 | \$37.55 | \$46.01 | \$54.82 | \$61.86 |
| 17-2141 | Mechanical Engineers | \$26.79 | \$34.70 | \$43.15 | \$52.23 | \$57.96 |
| 17-2199 | Engineers, All Other | \$16.88 | \$27.52 | \$40.84 | \$47.54 | \$56.72 |
| 17-2051 | Civil Engineers | \$18.63 | \$23.97 | \$32.78 | \$42.52 | \$49.82 |
| 27-1021 | Commercial and Industrial Designers | \$24.33 | \$29.46 | \$32.35 | \$35.25 | \$40.87 |
| 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 |
| 17-2112 | Industrial Engineers | \$25.88 | \$30.76 | \$35.20 | \$41.65 | \$51.04 |
| 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

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.

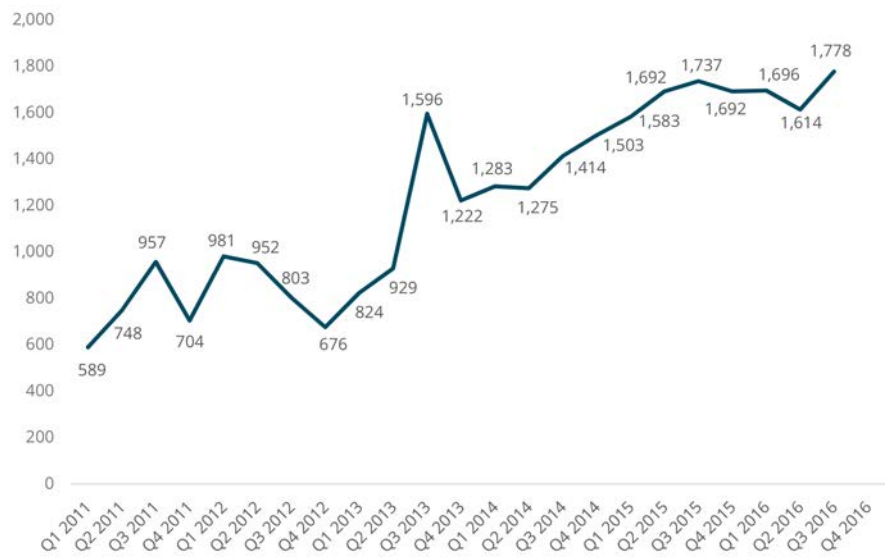
Job Posting Analysis

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 from 2014. Recently online postings reached its highest quarterly postings with 1,778 ads for health care related jobs in Q3 2016. This is a 10.2% increase from the 1,614 postings in Q2 2016.

Employment Analysis

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.

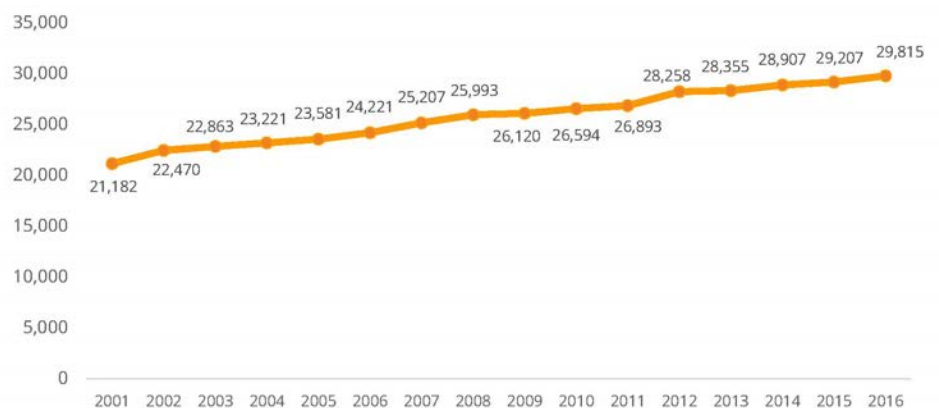
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI
Analysis: Workforce Intelligence Network



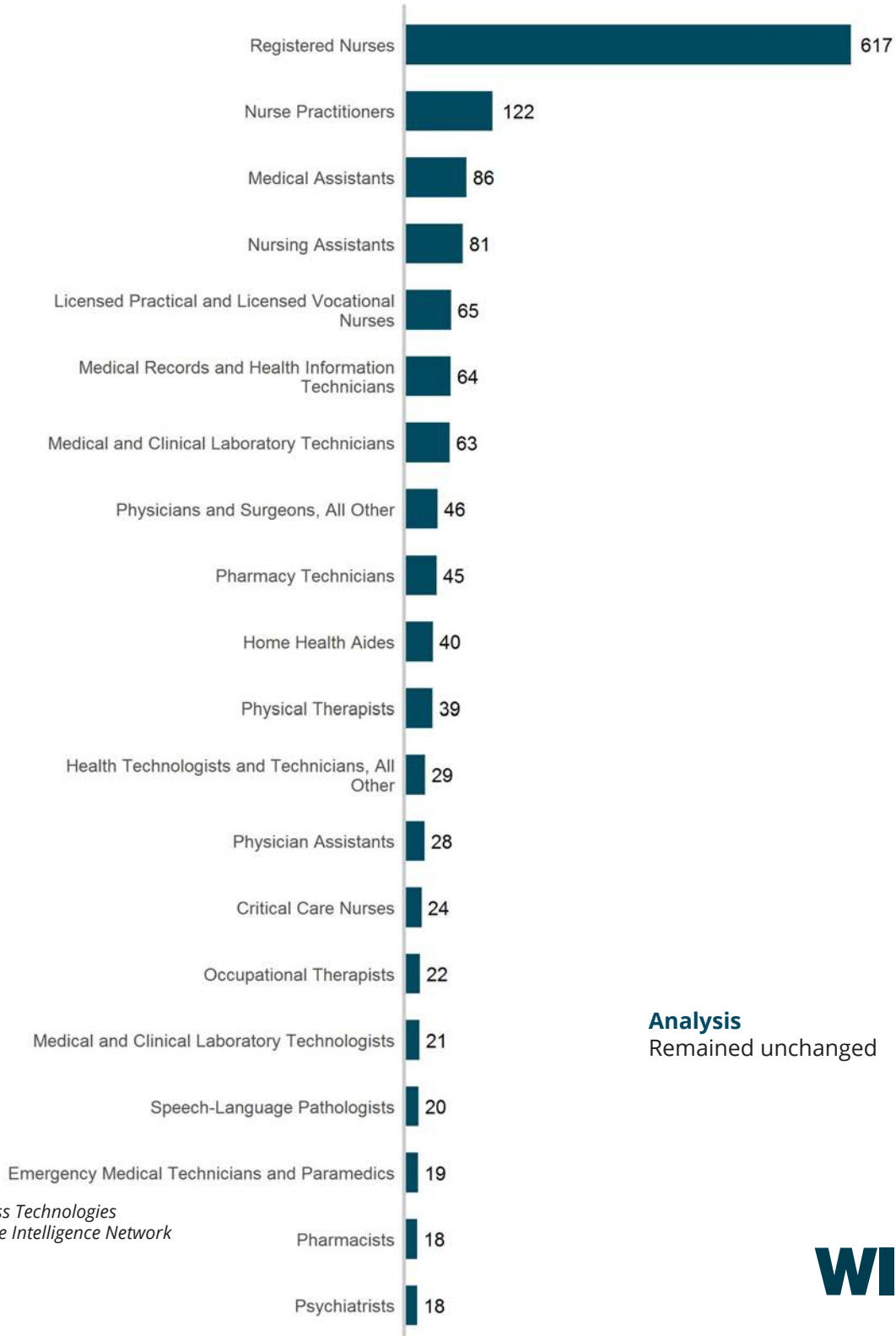
30,000 Health Care employees



Over 1,700 online job postings

Health Care Top Jobs

Quarter 3 2016



Analysis
Remained unchanged

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



\$60,000: average median
advertised salary

%

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 Q2 job postings required a high school diploma. Many employers prefer nurses holding associate degrees (360 postings) and high demand occupations like nurse practitioners, speech-language pathologists, and physician assistants require higher educational attainment (343 postings for workers with bachelor degrees). Most (656 postings) Health Care positions open in Washtenaw County during Q2 were targeting workers with entry level experience of 0 to 2 years.

Degrees and Certifications Required

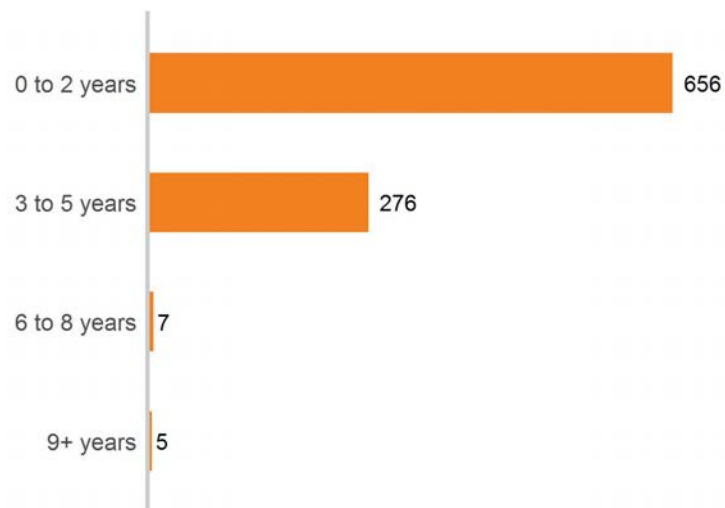
- Nursing Science
- Physical Therapy/Therapist
- Medicine
- Public Health, General
- Biology/Biological Sciences, General

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Knowledge areas: nursing,
public health, medicine

%

Education required: associate's
degree, short-term training

Health Care in-Demand Skills

Washtenaw County employers looking to hire Health Care workers in Q3 2016 sought basic skills like communication, teamwork, and writing and research as prerequisites for employment. Some of the more technical skills in-demand in Q3 job postings included treatment planning, patient care, and scheduling. Some in-demand health care occupations in Washtenaw during Q3 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: 63.4%
- Part-Time: 8.4%

Certifications Required

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



63% ads for full-time positions



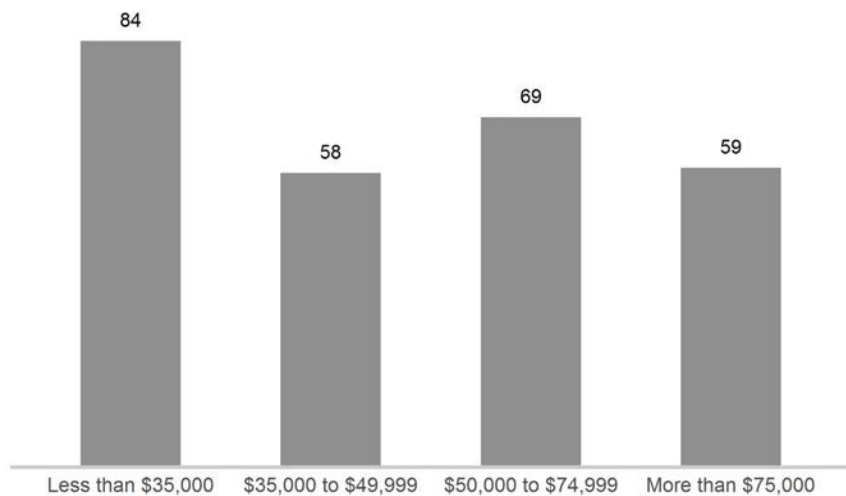
In-demand certifications: RN, ACLS, CPR

Health Care Wages

Only 270 of the 1,778 Health Care job postings for Q3 advertised a salary range. The distribution of those advertised salaries was quite evenly distributed and 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 physicians and surgeons.

Advertised Wages in Job Postings

Quarter 3 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 |
| 31-9092 | Medical Assistants | \$11.76 | \$12.98 | \$15.08 | \$18.28 | \$22.11 |
| 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 |
| 29-2071 | Medical Records and Health Information Technicians | \$14.71 | \$18.05 | \$23.38 | \$27.68 | \$30.55 |
| 29-2012 | Medical and Clinical Laboratory Technicians | \$9.02 | \$10.72 | \$14.18 | \$18.91 | \$30.41 |
| 29-1069 | Physicians and Surgeons, All Other | \$45.07 | \$55.65 | \$84.13 | \$98.96 | \$135.99 |
| 29-2052 | Pharmacy Technicians | \$8.99 | \$11.04 | \$14.93 | \$17.80 | \$20.27 |
| 31-1011 | Home Health Aides | \$8.33 | \$9.55 | \$10.56 | \$11.57 | \$13.84 |

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Information Technology

Introduction

Information Technology

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.

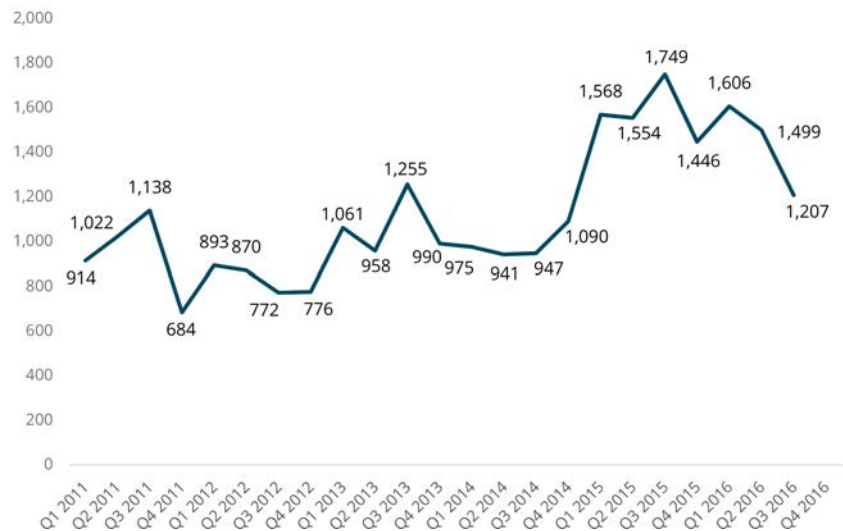
Job Posting Analysis

Moving into Q3 of 2016, IT online job postings witnessed a second consecutive quarter of decline. Postings fell by 20% from 1,499 online advertisements in Q2 2016 to 1,207 IT job ads in Q3 2016. With employment for IT workers increase in Washtenaw County it could be more jobs being filled leading to this decline in postings.

Employment Analysis

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.

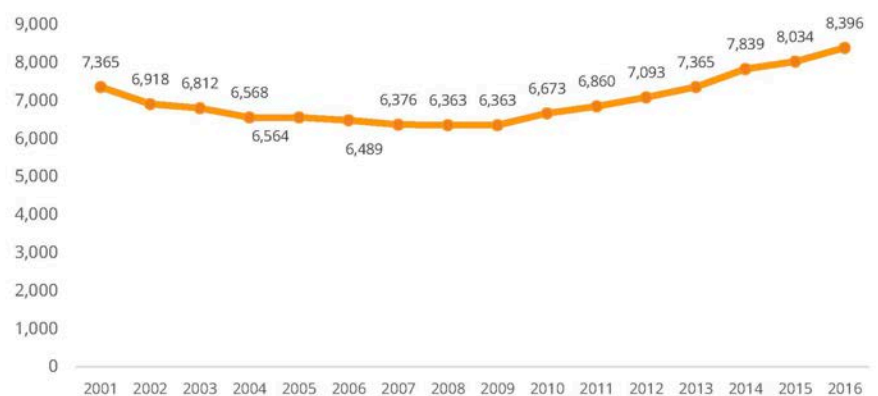
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI
Analysis: Workforce Intelligence Network



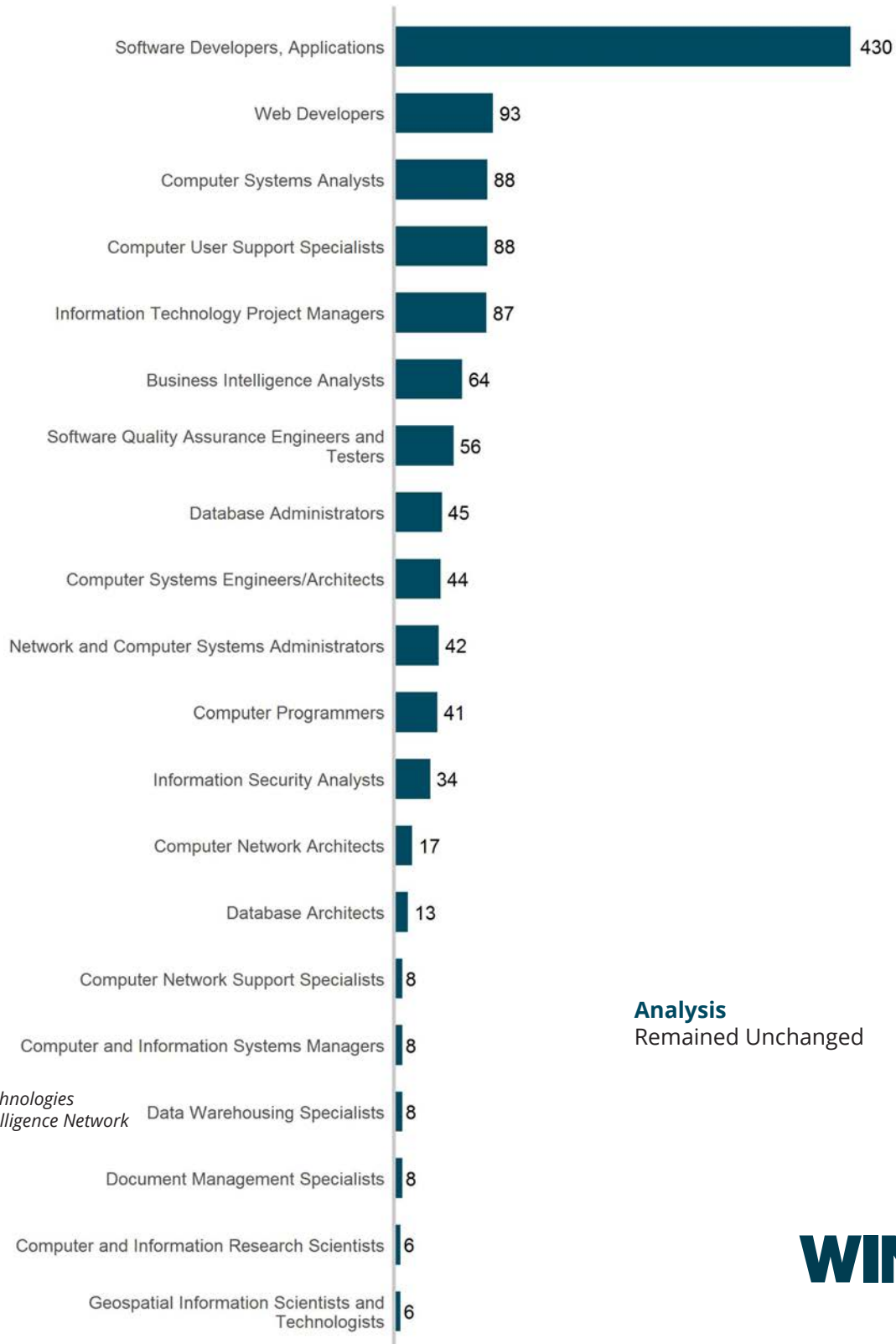
1,200 Information Technology
job ads



9,000 Information Technology
employees, surpassing pre-
recession levels

Information Technology Top Jobs

Quarter 3 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Analysis
Remained Unchanged



Mean advertised salary:
\$76,949

%

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

Information Technology Educational Attainment Required

Data from Q3 2016 online job postings show that most Information Technology positions in Washtenaw County require a bachelor's degree (730 postings). During Q3 there were still many IT positions open to workers with an associate's degree (61 postings) or who had undertaken some short-term training (53 postings). The majority of postings (608 postings) during Q3 2016 targeted Washtenaw County workers with fewer than 5 years of experience.

Degrees and Certifications Required

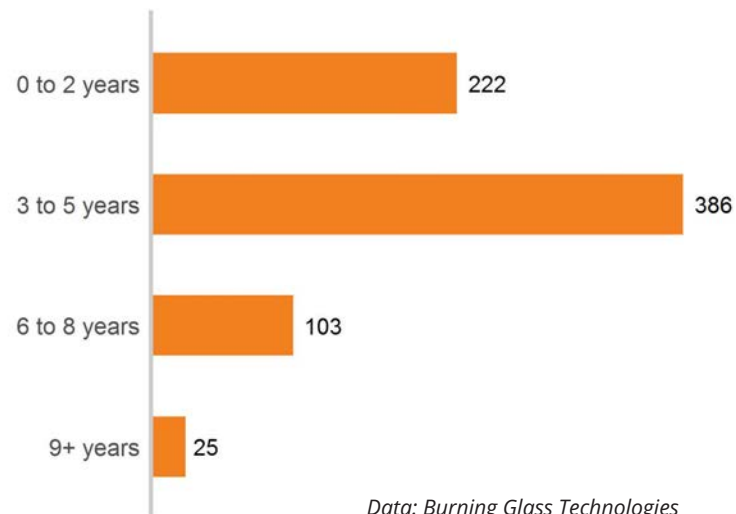
- Engineering, General
- Biomedical/Medical Engineering
- Drafting/Design Engineering Technologies/Technicians
- Computer Science
- Mechanical Engineering

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



In-demand certifications: PMP,
ABET, CISSP

%

62% ads for full-time positions

Information Technology in-Demand Skills

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 Q3 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.

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 and research
- Problem solving, troubleshooting
- Teamwork/collaboration
- Planning

Job Type

- Temporary: 5.1%
- Full-Time: 62.1%
- Part-Time: 1.6%

Certifications Required

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



Education required: bachelor's degree



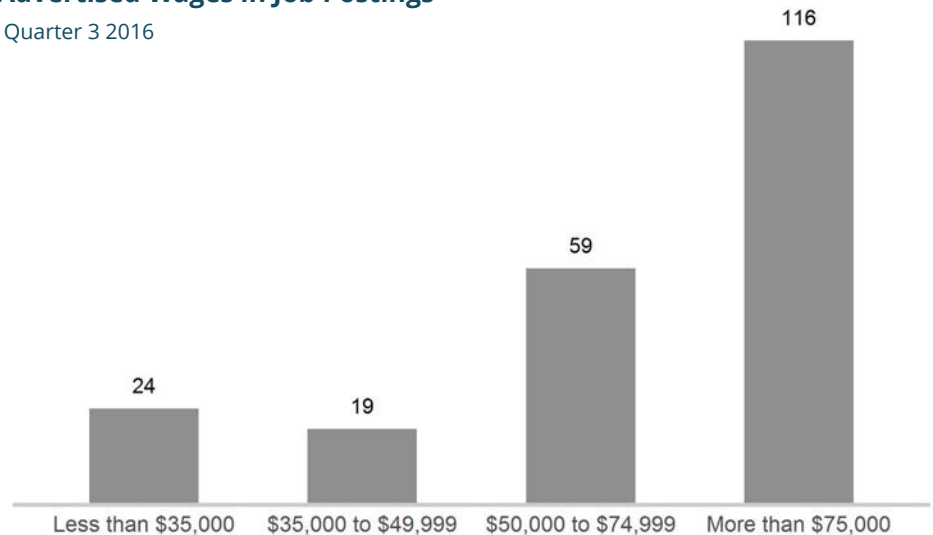
Knowledge areas: engineering, drafting, and computer science

Information Technology Wages

Information Technology occupations are some of the highest paying for Washtenaw County workers. Of the 218 Q3 job postings that advertised a wage or salary, 116 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 Wages in Job Postings

Quarter 3 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 |
|-----------------|--|-----------------------|-----------------------|--------------|-----------------------|-----------------------|
| 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 |
| 15-1151 | Computer User Support Specialists | \$10.05 | \$12.82 | \$18.80 | \$25.36 | \$32.69 |
| 15-1199 | Information Technology Project Managers | \$20.29 | \$26.86 | \$35.38 | \$44.42 | \$51.48 |
| 15-1199 | Business Intelligence Analysts | \$20.29 | \$26.86 | \$35.38 | \$44.42 | \$51.48 |
| 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 |
| 15-1199 | Computer Systems Engineers/Architects | \$20.29 | \$26.86 | \$35.38 | \$44.42 | \$51.48 |
| 15-1142 | Network and Computer Systems Administrators | \$20.09 | \$25.92 | \$32.52 | \$37.63 | \$45.27 |

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



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

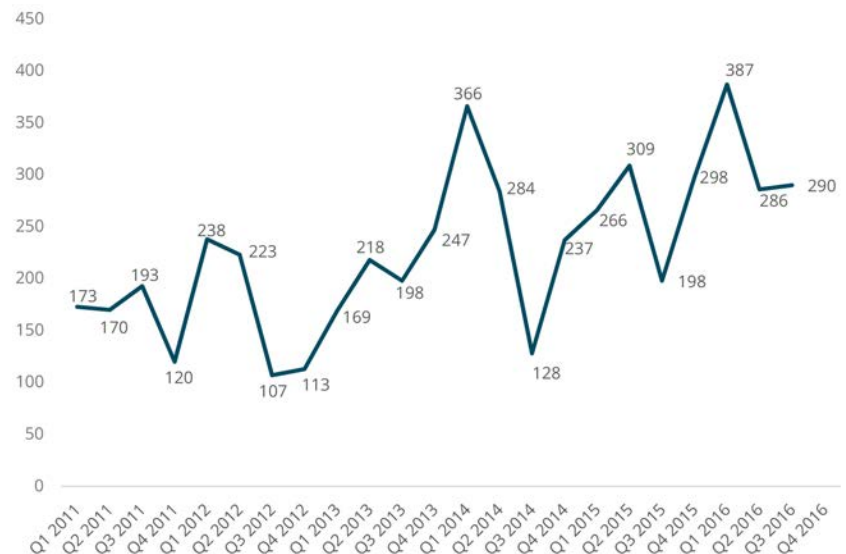
Job Posting Analysis

Washtenaw County advanced manufacturing employers posted approximately 100 fewer job ads for Skilled Trades workers during Q2 2016 than in Q1, but stabilized moving into Q3. The 290 Skilled Trades job postings in Q3 represent a 1% increase from Q2 numbers. Overall demand for Skilled Trades workers is growing in Washtenaw County.

Employment Analysis

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.

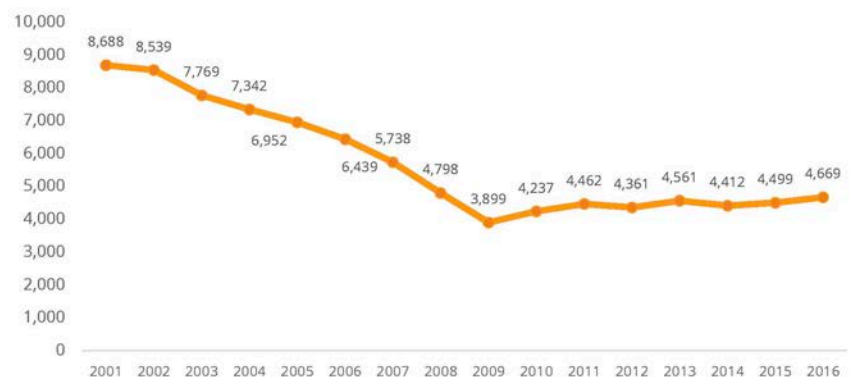
Online Job Postings



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Employment Over Time

Quarter 3 2016



Data: EMSI
Analysis: Workforce Intelligence Network



Education required: HS diploma & training

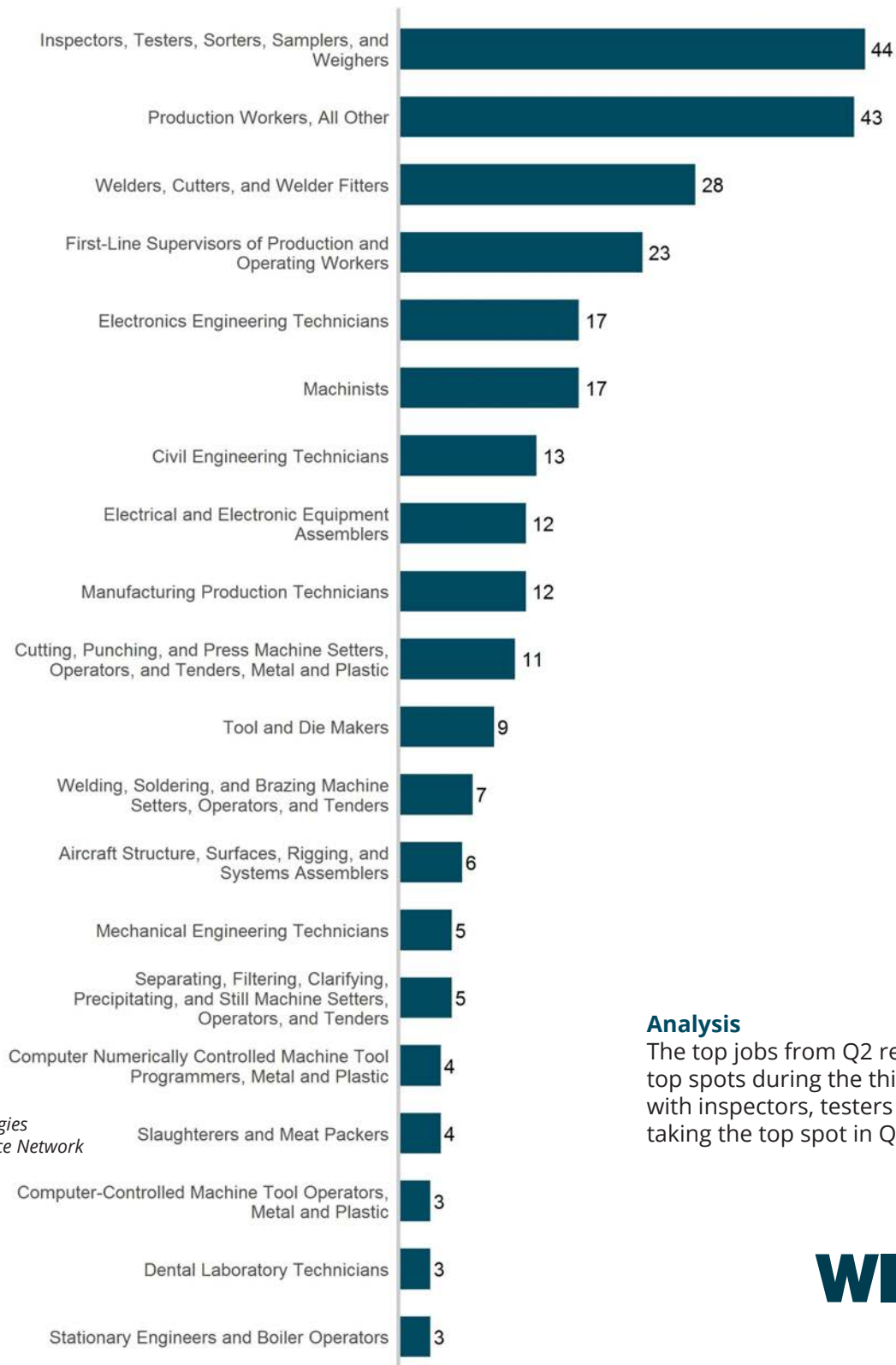


Experience required: less than 5 years

Skilled Trades & Technicians

Top Jobs

Quarter 3 2016



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Analysis

The top jobs from Q2 remained in top spots during the third quarter, with inspectors, testers and weighers taking the top spot in Q3 2016.



64% ads for full-time positions

%

Now hiring: 290 online job postings

Skilled Trades & Technicians Educational Attainment Required

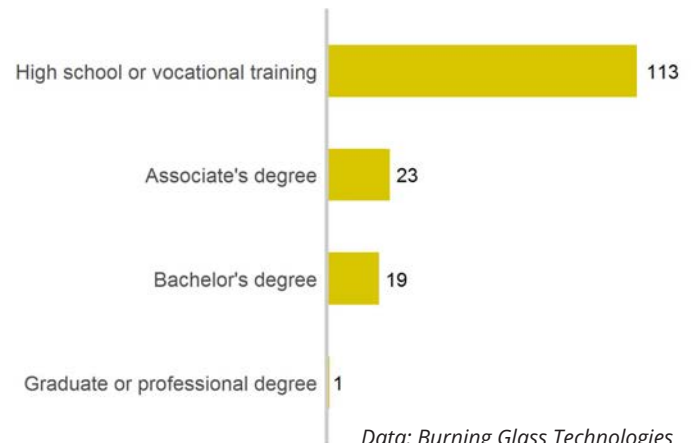
Just 156 of the 290 Q3 Skilled Trades job postings specified a desired level of educational attainment. The distribution of these requirements can be seen in the graph to the right: almost all jobs are attainable with a high school diploma and/or some vocational training. Most employers require training outside of high school but not all training results in a formal credential. Twenty postings required an associate's degree and 19 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 (102 postings during Q2). Again, those jobs requiring more experience, 6 years and beyond, are likely for some management occupations included in this group.

Degrees and Certifications Required

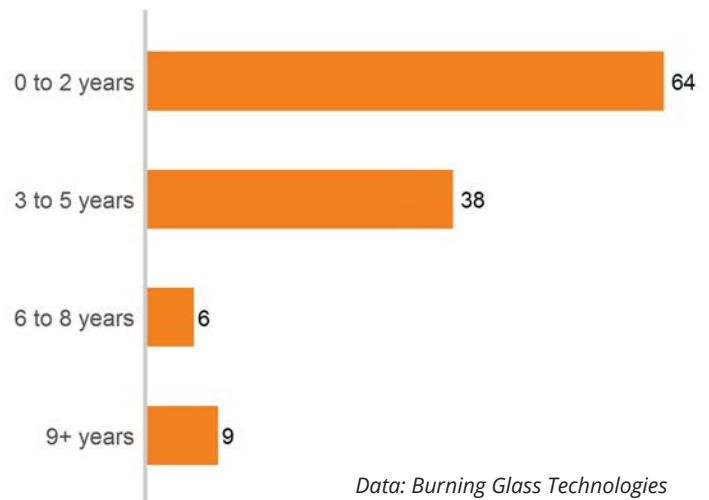
- Engineering, General
- Biomedical/Medical Engineering
- Drafting/Design Engineering Technologies/Technicians
- Computer Science
- Mechanical Engineering

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Mean advertised salary:
\$41,944

%

Knowledge areas: engineering,
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 and foundational skills skilled trades workers are required to have.

Technical in-Demand Skills

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

Foundational In-Demand Skills

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

Job Type

- Temporary: 15.5%
- Full-Time: 64.1%
- Part-Time: 0.7%

Certifications Required

- Security clearance
- Certified A+ Technician
- Commercial driver's license (CDL) Class A
- HVAC technician certifications (e.g. EPA 608)
- ABC Certified



In-demand certifications: CDL,
Certified A+ Technician



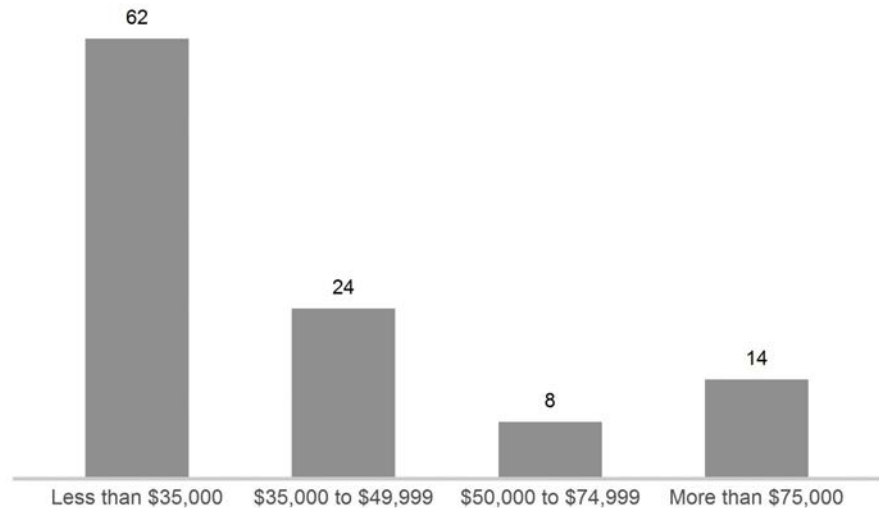
Technical skills: Inspection,
repair, welding

Skilled Trades & Technicians Wages

Thirty-seven percent (108 postings) of Skilled Trades job postings in Washtenaw County during Q3 2016 advertised a wage or salary range. The majority of those (62 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 Wages in Job Postings

Quarter 3 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 | Inspectors, Testers, Sorters, Samplers, and Weighers | \$9.52 | \$10.57 | \$12.49 | \$16.85 | \$18.63 |
| 51-9199 | Production Workers, All Other | \$9.52 | \$10.57 | \$12.49 | \$16.85 | \$18.63 |
| 51-4121 | Welders, Cutters, and Welder Fitters | \$12.55 | \$14.87 | \$19.22 | \$22.93 | \$33.07 |
| 51-1011 | First-Line Supervisors of Production and Operating Workers | \$19.51 | \$24.06 | \$29.66 | \$36.72 | \$43.37 |
| 17-3023 | Electronics Engineering Technicians | \$14.96 | \$17.88 | \$25.41 | \$32.68 | \$37.44 |
| 51-4041 | Machinists | \$13.44 | \$18.63 | \$24.42 | \$27.69 | \$29.67 |
| 17-3022 | Civil Engineering Technicians | \$13.99 | \$16.75 | \$23.49 | \$28.75 | \$33.54 |
| 51-2022 | Electrical and Electronic Equipment Assemblers | \$9.30 | \$12.46 | \$17.21 | \$22.43 | \$27.54 |
| 17-3029 | Manufacturing Production Technicians | \$13.48 | \$18.22 | \$26.65 | \$35.02 | \$38.36 |
| 51-4031 | Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic | \$8.63 | \$10.52 | \$13.29 | \$16.62 | \$22.92 |

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 Sept 2016) | Change from 2015 | Percent Change from 2015 |
|-------------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------------------|------------------|--------------------------|
| Labor Force | 182,801 | 180,796 | 182,072 | 185,236 | 188,116 | 189,852 | 195,259 | 5,406 | 2.8% |
| Employment | 167,969 | 168,467 | 171,208 | 174,393 | 178,965 | 183,151 | 189,001 | 5,849 | 3.2% |
| Unemployment | 14,832 | 12,330 | 10,863 | 10,843 | 9,152 | 6,701 | 6,258 | -443 | -6.6% |
| Unemployment Rate | 8.1% | 6.8% | 6.0% | 5.9% | 4.9% | 3.5% | 3.2% | -0.3% | na |

**Note: Monthly data averaged by year*

Data: Bureau of Labor Statistics

Quarterly Labor Market Data

| | 3rd Quarter 2015 | 4th Quarter 2015 | 1st Quarter 2016 | 2nd Quarter 2016 | 3rd Quarter 2016 | Change from 2nd Quarter 2016 | Percent Change from 2nd Quarter 2016 | One-Year Change from 3rd Quarter 2015 | One-Year Percent Change from 3rd Quarter 2015 |
|-------------------|------------------|------------------|------------------|------------------|------------------|------------------------------|--------------------------------------|---------------------------------------|---|
| Labor Force | 186,826 | 193,014 | 196,210 | 196,389 | 193,177 | -3,212 | -1.6% | 6,351 | 3.4% |
| Employment | 179,849 | 187,743 | 190,495 | 190,204 | 186,303 | -3,901 | -2.1% | 6,454 | 3.6% |
| Unemployment | 6,977 | 5,271 | 5,715 | 6,186 | 6,874 | 689 | 11.1% | -103 | -1.5% |
| Unemployment Rate | 3.7% | 2.7% | 2.9% | 3.1% | 3.6% | 0.4% | na | -0.2% | na |

**Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics

Monthly Labor Market Data

| | July 2015 | August 2015 | September 2015 | October 2015 | November 2015 | December 2015 | January 2016 | February 2016 | March 2016 | April 2016 | May 2016 | June 2017 | July 2017 | August 2017 | September 2017 |
|-------------------|-----------|-------------|----------------|--------------|---------------|---------------|--------------|---------------|------------|------------|----------|-----------|-----------|-------------|----------------|
| Labor Force | 188,567 | 186,573 | 185,338 | 192,346 | 193,420 | 193,276 | 192,793 | 197,515 | 198,322 | 199,404 | 195,556 | 194,208 | 191,867 | 192,221 | 195,443 |
| Employment | 179,781 | 180,173 | 179,592 | 186,605 | 188,272 | 188,353 | 187,258 | 191,825 | 192,403 | 193,954 | 189,251 | 187,406 | 184,061 | 185,469 | 189,378 |
| Unemployment | 8,786 | 6,400 | 5,746 | 5,741 | 5,148 | 4,923 | 5,535 | 5,690 | 5,919 | 5,450 | 6,305 | 6,802 | 7,806 | 6,752 | 6,065 |
| Unemployment Rate | 4.7% | 3.4% | 3.1% | 3.0% | 2.7% | 2.5% | 2.9% | 2.9% | 3.0% | 2.7% | 3.2% | 3.5% | 4.1% | 3.5% | 3.1% |

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












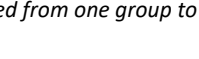
Data: Bureau of Labor Statistics

Washtenaw County Job Posting Data by Occupation Group* Over Time

| | Q3 2015 | Q4 2015 | Q1 2016 | Q2 2016 | Q3 2016 | Change Over Time | Annual Change Q3 2015-Q3 2016 | Quarter Growth Q1 2016-Q3 2016 |
|---|---------|---------|---------|---------|---------|------------------|-------------------------------------|--------------------------------------|
| Total Postings | 11,192 | 11,812 | 10,540 | 11,020 | 11,232 | | 0.4% | 6.6% |
| Agriculture | 183 | 186 | 163 | 197 | 175 | | -4.4% | 7.4% |
| Business & finance | 781 | 824 | 592 | 684 | 689 | | -11.8% | 16.4% |
| Construction | 80 | 111 | 80 | 132 | 100 | | 25.0% | 25.0% |
| Customer service | 2,101 | 2,361 | 2,057 | 2,255 | 2,584 | | 23.0% | 25.6% |
| Education | 327 | 255 | 259 | 259 | 347 | | 6.1% | 34.0% |
| Energy | 3 | 5 | 5 | 4 | 5 | | 66.7% | 0.0% |
| Engineers & designers | 480 | 516 | 469 | 480 | 374 | | -22.1% | -20.3% |
| Health care | 1,692 | 1,737 | 1,692 | 1,614 | 1,778 | | 5.1% | 5.1% |
| Information technology | 1,554 | 1,749 | 1,446 | 1,499 | 1,207 | | -22.3% | -16.5% |
| Skilled trades & technicians | 309 | 198 | 298 | 286 | 290 | | -6.1% | -2.7% |
| Transportation, distribution, and logistics | 691 | 515 | 477 | 646 | 687 | | -0.6% | 44.0% |

**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.*

Job Posting Data by Occupation Group* Over Time

| | Q3 2015 | Q4 2015 | Q1 2016 | Q2 2016 | Q3 2016 | Change Over Time | Annual Change Q3 2015-Q3 2016 | Quarter Growth Q1 2016-Q3 2016 |
|---|---------|---------|---------|---------|---------|---|-------------------------------------|--------------------------------------|
| Total Postings | 129,794 | 140,225 | 126,959 | 139,765 | 149,379 |  | 15.1% | 17.7% |
| Agriculture | 1,644 | 1,578 | 1,426 | 1,835 | 1,776 |  | 8.0% | 24.5% |
| Business & finance | 9,437 | 10,547 | 8,884 | 9,011 | 9,044 |  | -4.2% | 1.8% |
| Construction | 1,096 | 1,183 | 917 | 1,281 | 1,492 |  | 36.1% | 62.7% |
| Customer service | 25,802 | 30,285 | 27,235 | 30,303 | 34,218 |  | 32.6% | 25.6% |
| Education | 2,227 | 2,584 | 2,219 | 2,114 | 3,034 |  | 36.2% | 36.7% |
| Energy | 224 | 264 | 211 | 272 | 259 |  | 15.6% | 22.7% |
| Engineers & designers | 9,753 | 10,433 | 9,675 | 9,454 | 8,977 |  | -8.0% | -7.2% |
| Health care | 17,394 | 17,110 | 17,666 | 17,880 | 20,099 |  | 15.6% | 13.8% |
| Information technology | 16,922 | 19,360 | 16,403 | 17,335 | 16,966 |  | 0.3% | 3.4% |
| Skilled trades & technicians | 3,961 | 4,409 | 3,675 | 4,503 | 4,755 |  | 20.0% | 29.4% |
| Transportation, distribution, and logistics | 9,901 | 8,405 | 7,909 | 11,380 | 13,548 |  | 36.8% | 71.3% |

**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.*

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