

Q1 2017
January - March

WAYNE COUNTY

WIN Labor Market Report



Introduction: Wayne 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 Wayne County as a whole 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:

- Energy (page 6)
- Engineers & Designers, Manufacturing Focused (page 11)
- Health Care (page 16)
- Information Technology (IT) (page 21)
- Skilled Trades & 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: Wayne County

2016 Year in Review

Employer demand in the Wayne County sustained year-over-year growth and employer demand rebounded from Q2 to Q3 2016 postings set a record high of 58,610 from 54,770, only to set another record high in Q1 2017 at 58,903. Growth between Q1 2016 and Q1 2017 was 7.5 percent, an addition of 4,133 job postings. Occupation group specific job postings with Wayne County vary starkly in demand. Energy job demand is generally low relative to the other occupation groups assessed in this report and while they have grown overtime, quarterly fluctuations are volatile. Between Q1 and Q4 2016 quarterly job demand declined 13 percent. However, between Q1 2016 and Q1 2017, postings are up 25 percent, or 33 additional job postings to a total of 164. Job demand for engineers and designers, like energy postings, declined 13 percent between Q1 and Q4 of 2016. Unlike energy postings, however, year over year job demand is down 17.2 percent, or a difference of 538 postings at 2,591 in total from 3,129 postings in Q1 2016. As strong health care job demand conditions since 2014 would suggest, job postings are up by 1,919 or 23 percent since Q1 2016. IT job postings consisted of successive quarter-to-quarter declines between Q2 and Q4 2016- peaking at 8,018, only to continue declining sharply thereafter into Q1 2017 at 6,363 from 6,931 in Q1 2016. Year over year IT job demand decreased 8.2 percent, or 568 job postings. Skilled trades and technician job demand is up 17.6 percent since Q1 2016, reaching an all-time high at 1,664 job postings (+249 job postings).

The labor force in Wayne County grew 2.4 percent since Q1 2016 to a total of 784,224 adding 18,710 individuals, according to quarterly labor market data. The labor force remained flat during Q1 and Q2 of 2016 with declines in the subsequent quarters, only to rebound in Q1 2017 for net labor force growth. Employment grew at 1.8 percent, adding 12,882 employed individuals to the labor market. Unemployment, year over year, increased by only 0.6 percent to 6.8 percent, reaching a 5.9 percent low in Q2 2016.

Key Findings for Q1 2017

Online job postings for Wayne county reach new high point.

Since 2011, in the first quarter of the year, the amount of job postings in Wayne County typically rises. Q1 of 2017 continued that trend, reaching a new high of 58,903 postings. This is just over a five percent increase in postings from one year ago, in Q1 of 2016. (See page 3 for more information)

More individuals seeking work in Wayne County!

The labor force, employment, and unemployment in Wayne County all saw increases from Q4 2016 to Q1 2017. The increase in the unemployment rate, from 6.1 percent in Q4 2016 to 6.8 percent in Q1 2017, can be attributed to the large rise in the labor force. (See page 3 for more information)

Online job postings for occupations related to Health Care reach an all-time high.

Online job postings for Health Care occupations have been on an upward trend since Q3 2014. From this quarter, there has been an increase of over 7,000 postings resulting in a new high of over 10,000 total postings.

Communication and other foundational skills remain in high demand for most occupations in Wayne County.

For the last several quarters, foundational skills such as communication and leadership have been the most requested set of abilities from employers that included skills in their postings. Technical abilities are a necessity for most jobs, but well-rounded foundational skills can make a candidate much more appealing to employers.

Online job postings for Skilled Trades related occupations reaches record high.

Online jobs postings for Skilled Trades related occupations have historically fluctuated from quarter to quarter. Recently, however, it seems that Skilled Trades postings are following a more positive trend, growing for a fourth consecutive quarter. In Q1 of 2017, postings rose yet again to over 1,600, setting a record high for Skilled Trades. (See page 26 for more information)

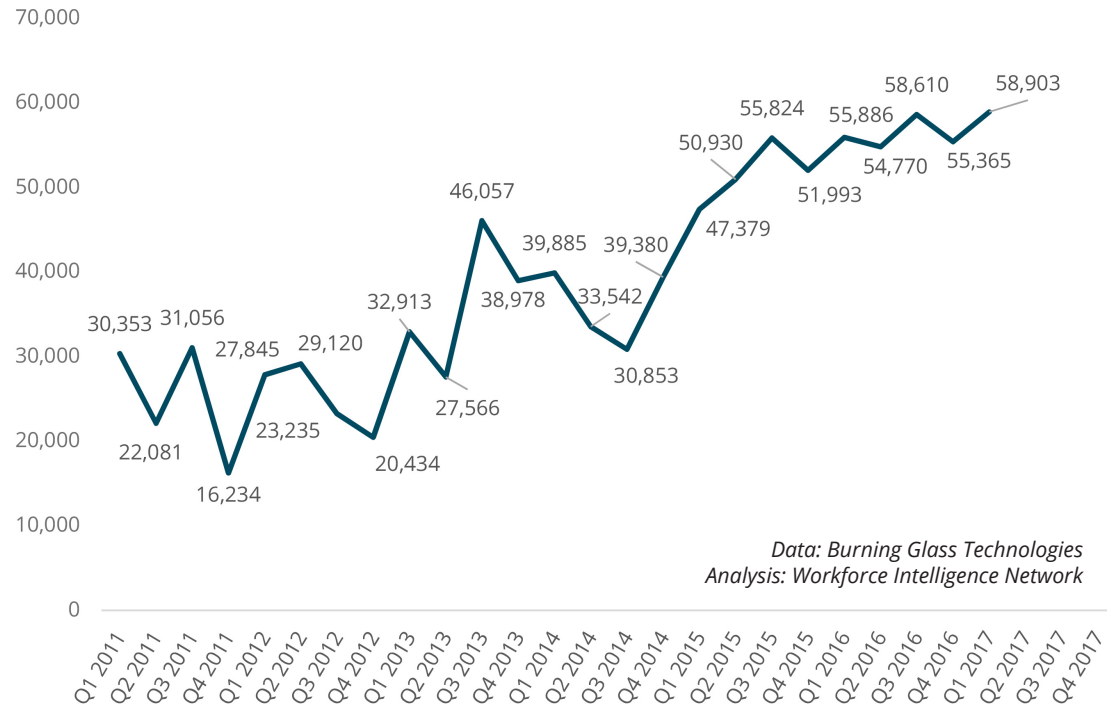


Workforce and Employer Demand Indicators

Postings over time

Employer demand rebounded from Q4 2016 to Q1 2017, as online job postings set a record high of 58,903 from 55,365 (+6 percent). Q1 2017 continues the average of over 50,000 online job ads for six consecutive quarters, reinforcing that employer demand remains strong in Wayne County.

WIN Region Online Job Postings

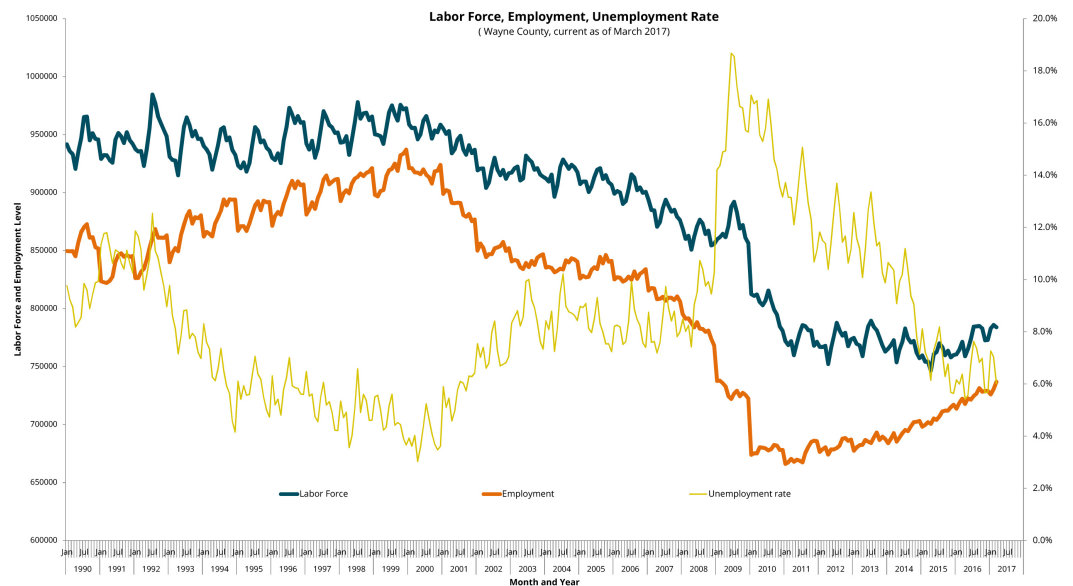


Labor force/employment/unemployment

The labor force increased by just over 8,000 individuals (+1 percent) to 784,224 in Q1 2017. Employment also increased by just over 2,300 workers (+0.3 percent) to 721,104, as did unemployment by just over 5,600 individuals (+12 percent) bringing the Q1 2017 unemployment rate to 6.8 percent.

Labor Force, Employment, Unemployment Rate

Quarter 1 2017



Data: BLS
Analysis: Workforce Intelligence Network



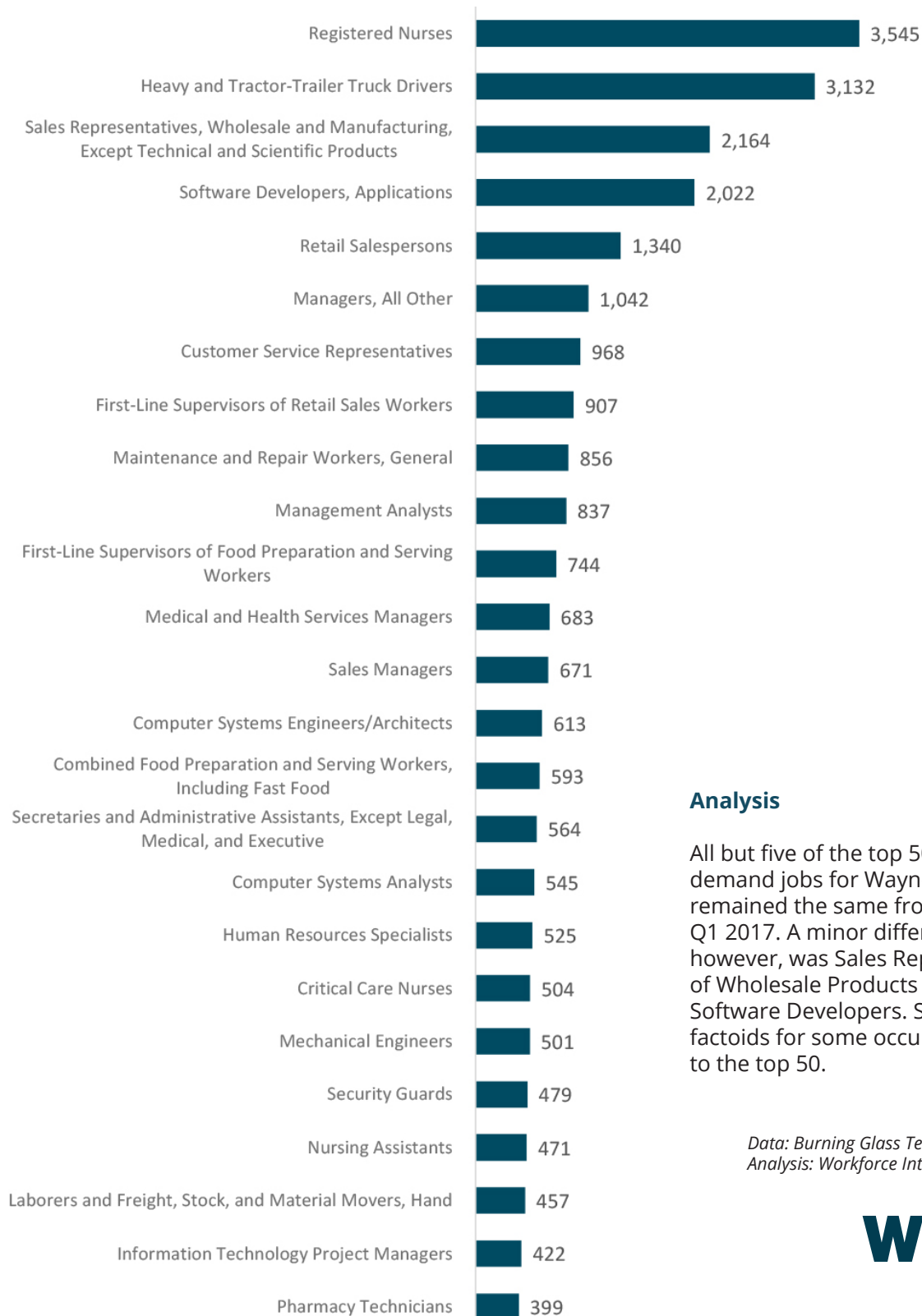
Postings at all-time high
over 58,900 online ads

6.8%

Unemployment rate

Top Jobs

Quarter 1 2017



Analysis

All but five of the top 50 most in-demand jobs for Wayne County remained the same from Q4 2016 to Q1 2017. A minor difference however, was Sales Representatives of Wholesale Products overtaking Software Developers. See the factoids for some occupations new to the top 50.

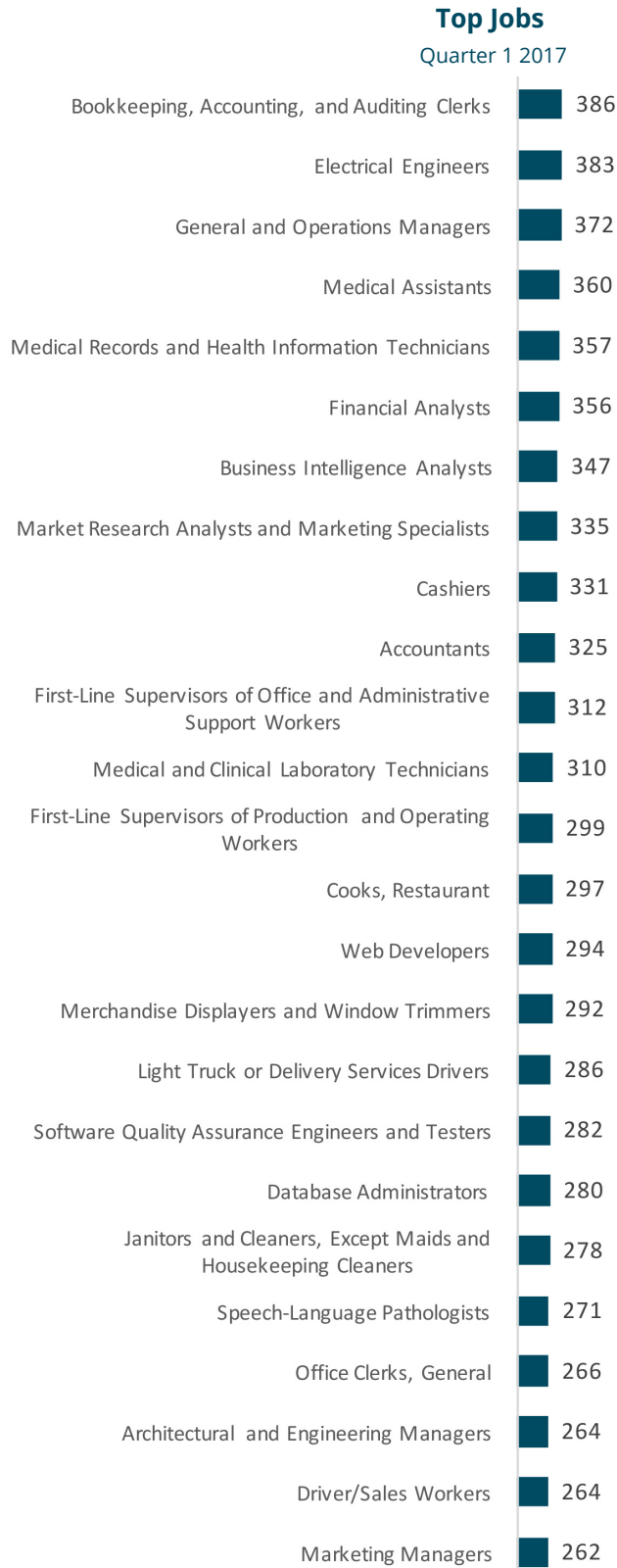
Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



New to top 50: architectural and engineering managers



Restaurant cooks: most in-demand workers that are new to the top 50



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Introduction

Energy-related occupations encompass jobs in engineering, science, mining, and extraction. Workers in this field have a range of skills all related to keeping businesses and homes powered. Energy companies employ workers in a variety of occupations, many of which are also included in other WIN occupation groups. Data referenced in this section pertain only to job postings from energy-related businesses.

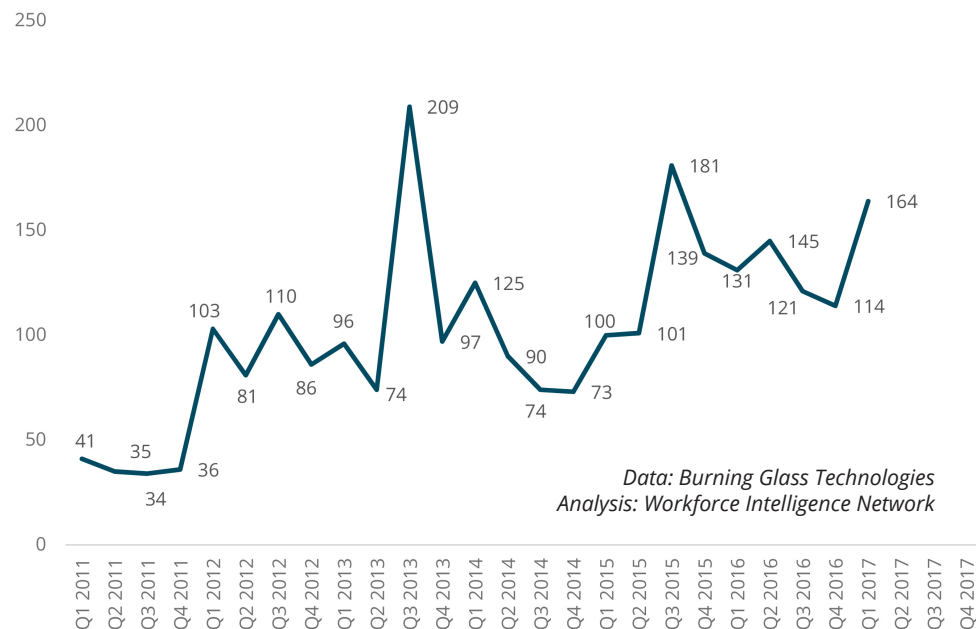
Job Posting Analysis

Online postings for Energy-related occupations in Wayne County increased by 50 postings (+44 percent) from Q4 2016 to Q1 2017. While postings for Q3 2013 and Q3 2015 mark high points in online postings for this occupation group, the 164 postings in Q1 2017 mark the third highest amount since Q1 2011.

Employment Analysis

Like the other occupation groups, Energy experienced a drop-off in employment during the Great Recession, but smaller on average than others. Following growth between 2011 and 2014, employment in the Energy sector has been decreasing in Wayne County. Recent estimates have employment in the county at just under 3,900 workers.

Online Job Postings



Employment Over Time

Quarter 1 2017



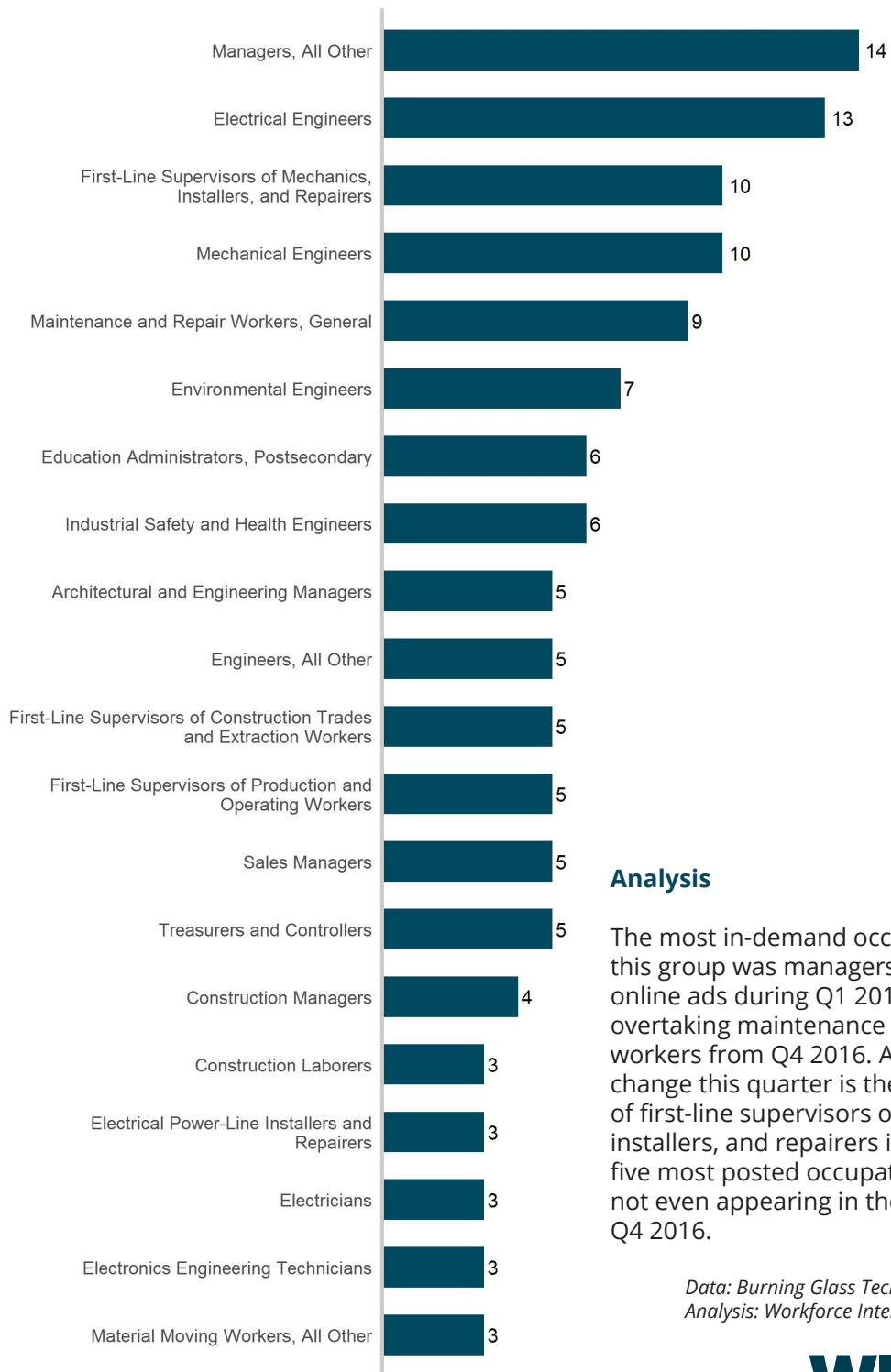


Mechanical engineers is new
to the top 20



Environmental engineers is
new to the top 20

**Energy
Top Jobs**
Quarter 1 2017



Analysis

The most in-demand occupation in this group was managers with 14 online ads during Q1 2017, overtaking maintenance and repair workers from Q4 2016. A notable change this quarter is the movement of first-line supervisors of mechanics, installers, and repairers into the top five most posted occupations while not even appearing in the top 20 for Q4 2016.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



There are 10 new occupations
in the top 20

54%
of Energy postings require
3-5 years of experience

Energy Educational Attainment Required

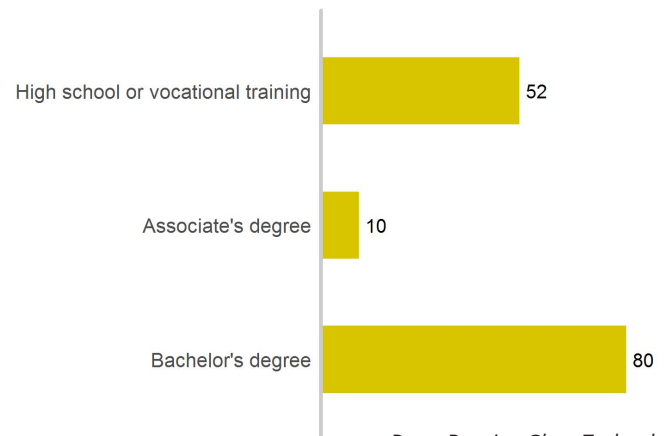
In Q1 2017, Energy occupational postings advertising educational requirements sought candidates with a bachelor's degree (56 percent of total) more so than candidates with a high school diploma or vocational training. Opportunities still exist for those with an associate's degree or a professional degree, but advertisements do not request these requirements as often.

Meanwhile, over half of postings show that employers prefer Energy workers with three to five years of experience, and in some instances, even more. The high levels of experience required most likely indicate that many of these postings offered supervisor or management positions.

In-Demand Area of Study

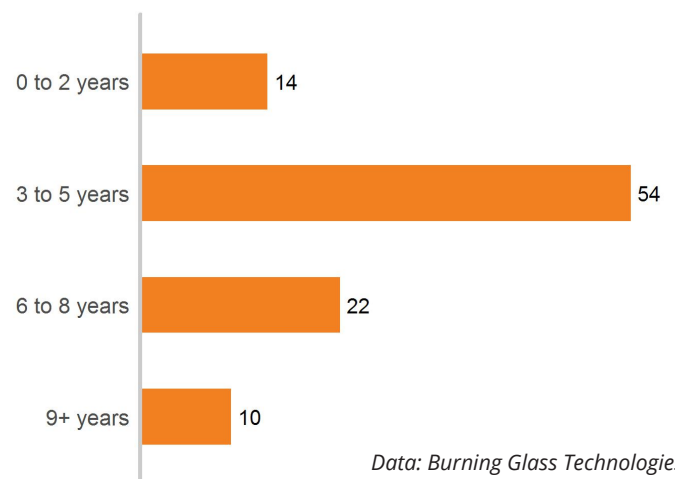
- Engineering, General
- Engineering Technology, General
- Mechanical Engineering
- Electrical and Electronic Engineering Technologies/Technicians, Other
- Business Administration and Management, General

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



In-demand certifications:
Professional Engineer, PMP



Most in-demand technical skill:
Budgeting

Energy In-Demand Skills

The most often advertised technical and foundational skills for Energy occupations demonstrate that Wayne County employers are most likely seeking management roles for many of the postings. In addition to having well-rounded foundational skills, such as team work, and strong specialized management skills, these workers also need knowledge in areas like environmental regulations.

Technical In-Demand Skills

- Budgeting/Cost Estimation/Procurement/Financial Management
- Supervisory skills/Project Management/Contract Management
- Repair/Technical Support/Inspection
- Environmental Compliance/Environmental Regulations
- Customer Contact/Customer Service

Foundational In-Demand Skills

- Communication/Writing/Presentation Skills
- Problem Solving/Troubleshooting
- Building Effective Relationships/Team Work and Collaboration
- Organizational Skills/Multi-Tasking/Prioritizing Tasks
- Leadership/Management/Decision Making

Job Type

- Full-time: 35%
- Part-time: 0.6%
- Temporary: N/A

Certifications Required

- Professional Engineer
- Project Management Certification (e.g. PMP)
- Air Break Certified
- Commercial Driver's License
- Basic Electricity Certificate



Architectural/Engineering Managers
can make over \$177k annually



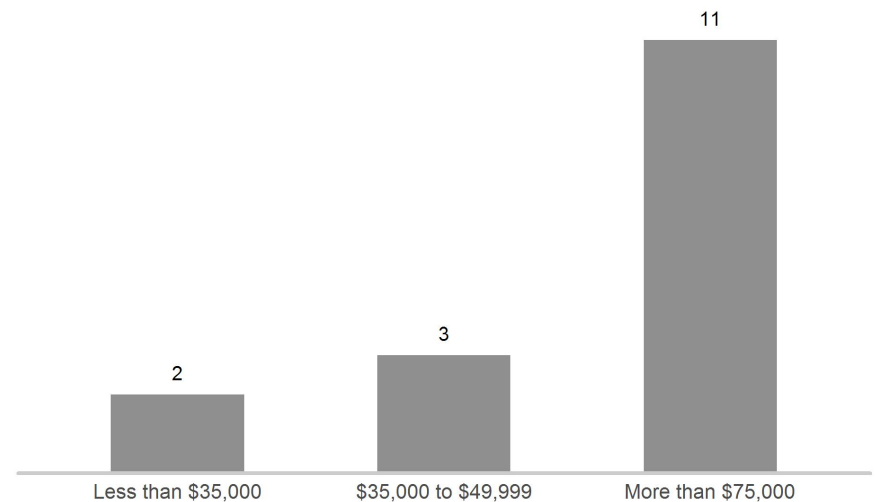
Median advertised wages :
\$73,160

Energy Wages

Despite the low number of postings advertising wages for Energy related occupations (only 10 percent), the majority offered wages above \$75,000. This further demonstrates that most of these occupations most likely skills and abilities related to engineering, management, or a combination of both. The average annual salary across advertised postings was \$73,160. Seven of the top ten Energy occupations offer median wages above \$30 per hour, while one offers above \$40 per hour at the same level. While maintenance and repair workers have the lowest entry-level salary of the top ten Energy occupations, at the 90th percentile of earnings they can make just over \$57,400 per year.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
11-9199	Managers, All Other	\$21.41	\$26.15	\$32.30	\$39.48	\$47.39
17-2071	Electrical Engineers	\$28.97	\$34.90	\$42.69	\$50.55	\$60.05
17-2141	Mechanical Engineers	\$29.12	\$36.05	\$44.27	\$53.43	\$60.42
17-2081	Environmental Engineers	\$26.22	\$34.95	\$43.05	\$52.25	\$61.21
49-1011	First-Line Supervisors of Mechanics, Installers, and Repairers	\$18.99	\$24.16	\$31.33	\$39.79	\$47.58
17-2111	Industrial Safety and Health Engineers	\$31.50	\$38.49	\$47.12	\$56.50	\$64.15
11-9041	Architectural and Engineering Managers	\$40.65	\$49.46	\$60.17	\$72.35	\$85.16
11-2022	Sales Managers	\$31.26	\$42.44	\$55.93	\$73.41	\$114.67
11-3031	Treasurers and Controllers	\$30.69	\$39.32	\$51.61	\$68.84	\$103.86
11-9021	Construction Managers	\$21.85	\$25.40	\$29.71	\$36.50	\$47.25

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Engineers & Designers (Manufacturing Focused)

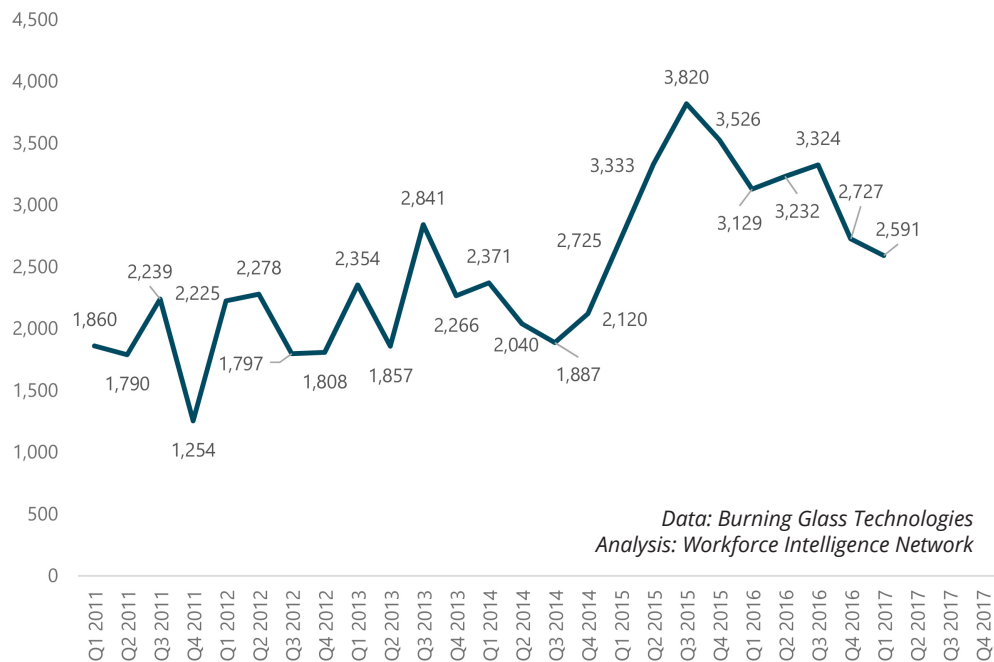
Introduction

Jobs in the manufacturing industry can range from assembly and production, to skilled trades and technicians, designers and engineers, and even computer-related occupations such as software development. Demand for engineers in the region has been consistent, and employment has been growing quickly.

Job Posting Analysis

Online job postings for Engineers and Designers in Q1 2017 continued the decline seen between Q3 and Q4 of 2016, with a drop of 136 postings (-5 percent). Online ads for this occupation group continue to hover over the amount of postings seen in the majority of past quarters between the years of 2011 and 2014, as seen in the graph to the right.

Online Job Postings

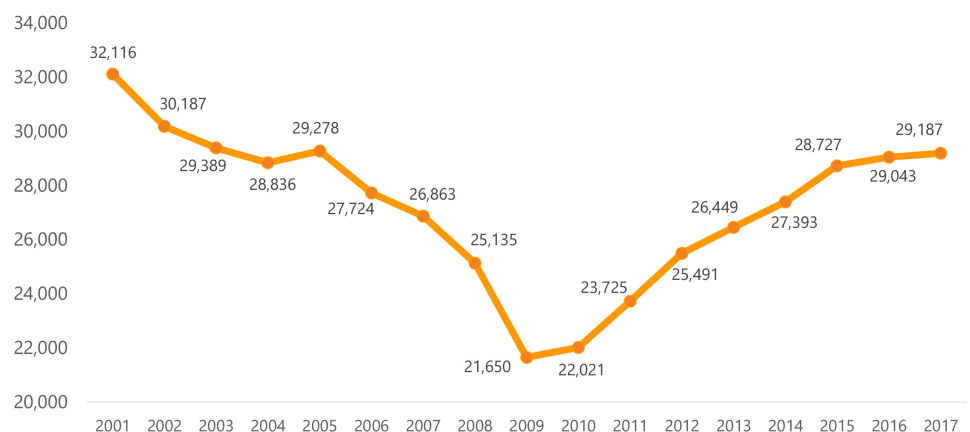


Employment Analysis

Employment of Engineers and Designers increased to 29,187 workers during Q1 2017. This occupation group has not seen this level of employment in Wayne County since 2005. This may be a reason for the slight decrease in online job postings as employment continues to grow towards in pre-recessionary peak of 32,116, back in 2001.

Employment Over Time

Quarter 1 2017



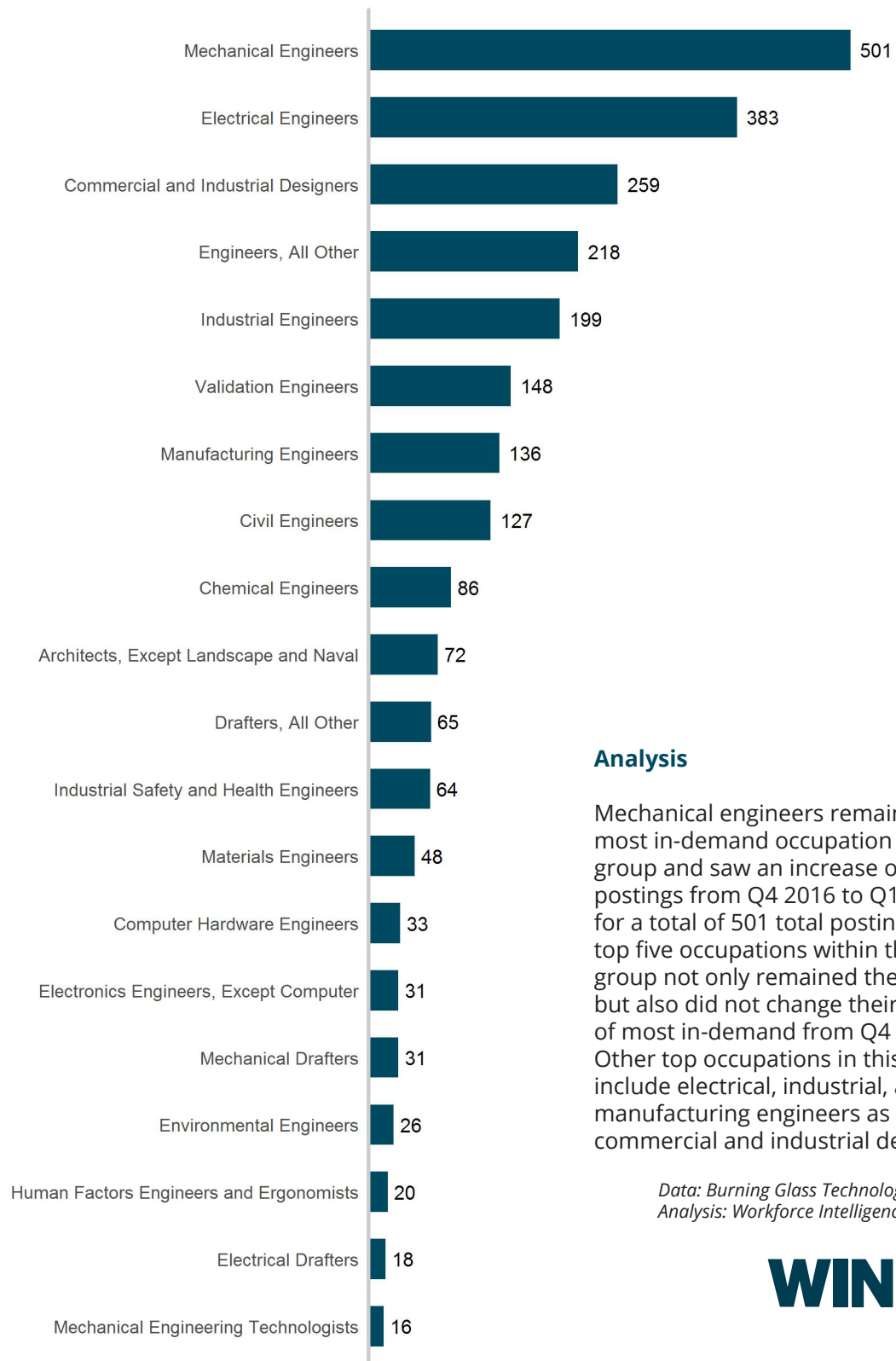


8th consecutive year of increased employment



Top 20 jobs saw no change from Q4 2016 to Q1 2017

Engineers & Designers Top Jobs Quarter 1 2017



Analysis

Mechanical engineers remained the most in-demand occupation in this group and saw an increase of 16 postings from Q4 2016 to Q1 2017, for a total of 501 total postings. The top five occupations within this group not only remained the same, but also did not change their order of most in-demand from Q4 2016. Other top occupations in this group include electrical, industrial, and manufacturing engineers as well as commercial and industrial designers.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



6th most in-demand program of study is Engineering Technology



Bachelor's degree highly sought after!

Engineers & Designers Educational Attainment Required

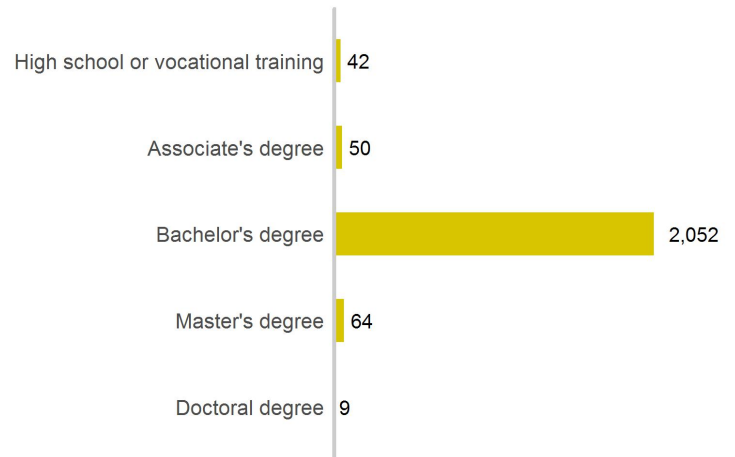
About 2,052 (93 percent) out of the 2,217 advertised postings for minimum education requirements asked that applicants have a bachelor's degree. That is over 12 times more postings asking for a bachelor's degree than the other three minimum education requirements, seen to the right, combined.

Engineering and Design employers prefer applicants with some previous experience. In the case of Q1 2017, the majority (57 percent) seek those in the three to five-year range. This is not to say that employment for recently graduated engineers does not exist in Wayne County, as there are over 450 online ads requiring two years or less of experience.

In-Demand Area of Study

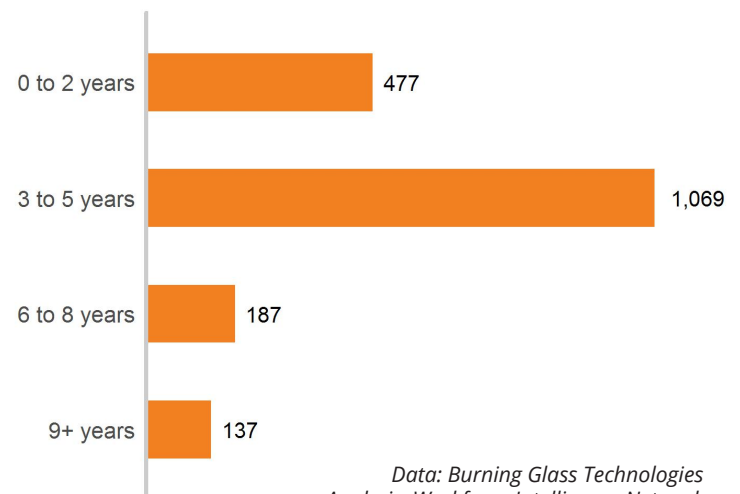
- Engineering, General
- Mechanical Engineering
- Electrical and Electronic Engineering Technologies/Technicians, Other
- Computer Science
- Computer Engineering

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Quality Engineer certification is the 6th most in-demand certification

21%

of postings looking for skills requested
Mechanical Engineering proficiency

Engineers & Designers In-Demand Skills

The most often advertised baseline and specialized skills for Engineers and Designers continue to demonstrate that Wayne County employers seek workers with well-rounded foundational skills along with expertise for a specific specialized skill. Along with being proficient in regards to their acquired degree, Engineers and Designers must also have strong communication, problem solving, and team work skills.

Technical In-Demand Skills

- Microsoft Office
- Mechanical Engineering/Electrical Engineering/Industrial Engineering
- Product Development/Product Design/Manufacturing Process
- AutoCAD/CATIA/MATLAB/CAD/PLC/Six Sigma
- Budgeting/Purchasing/Cost Control/Cost Estimation

Foundational In-Demand Skills

- Communication Skills/Writing/Presentation Skills
- Problem Solving/Troubleshooting/Preventative Maintenance
- Leadership/Self-Starter/Project Planning and Development Skills/Management
- Organizational Skills/Teamwork and Collaboration
- Multi-Tasking

Job Type

- Full-time: 55%
- Part-time: 0.5%
- Temporary: 2.4%

Certifications Required

- Professional Engineer
- Six Sigma Certification
- American Board for Engineering and Technology (ABET) Accredited
- Six Sigma Green Belt
- Six Sigma Black Belt



90th percentile annual wage for manufacturing engineer: \$132,000

65%

of engineering and designer postings offer over \$75,000 per year

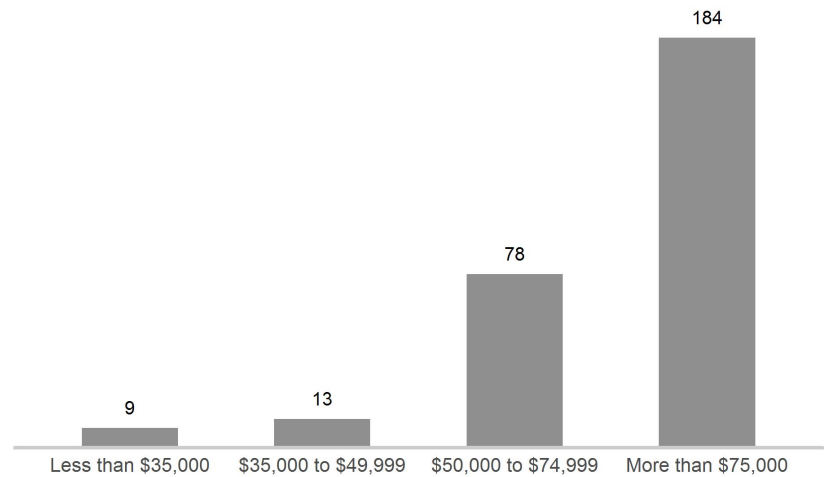
Engineers & Designers Wages

About 2,300 online job postings in Q1 2017 did not specify a salary, but of the 284 that did, 262 offered wages over \$50,000 per year. The average annual salary across this occupation group is \$82,010. The higher concentration of postings showing these higher wages indicates the education levels necessary and high demand coming from employers.

All the top occupations in this group offer over \$30 per hour at the median level. The lowest wage at entry-level is \$21.62 per hour for non-landscape and naval architects, though at the 90th percentile, they can make over \$103,000 per year.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
17-2141	Mechanical Engineers	\$29.12	\$36.05	\$44.27	\$53.43	\$60.42
17-2071	Electrical Engineers	\$28.97	\$34.90	\$42.69	\$50.55	\$60.05
27-1021	Commercial and Industrial Designers	\$26.26	\$32.64	\$39.12	\$44.93	\$50.70
17-2199	Engineers, All Other	\$25.39	\$35.91	\$44.51	\$54.01	\$63.44
17-2112	Industrial Engineers	\$30.15	\$36.92	\$43.89	\$52.36	\$59.16
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
17-2051	Civil Engineers	\$24.61	\$29.18	\$34.59	\$40.59	\$48.81
17-2041	Chemical Engineers	\$28.79	\$33.66	\$40.23	\$49.17	\$62.00
17-1011	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.

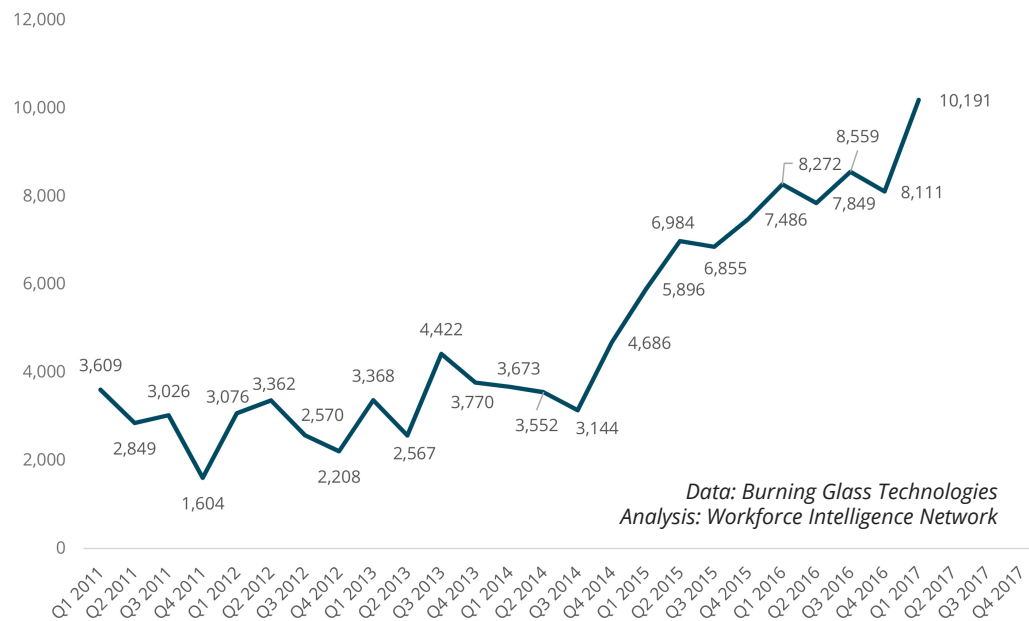
Job Posting Analysis

Online job postings for Health Care shot up in Q1 2017, surpassing the record level of postings in Q3 2016. Online ads for this occupation group rose by 26 percent to 10,191, the first instance of postings reaching five figures. This overall trend of increased postings shows strong demand for these occupations in Wayne County.

Employment Analysis

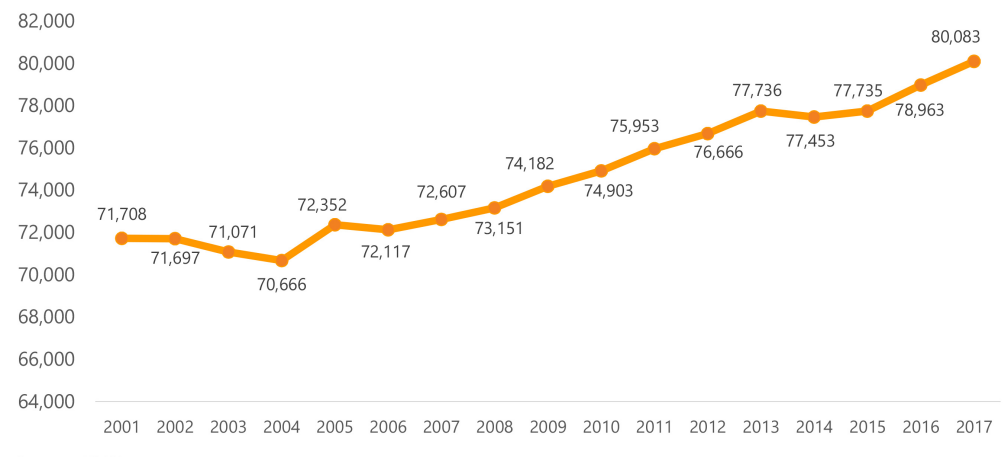
Following the upward trend of postings, Health Care employment increased by just over 1,100 workers to over 80,000. The 1.4 percent jump demonstrates the strength of the Health Care sector, as employment has increased annually since 2006.

Online Job Postings



Employment Over Time

Quarter 1 2017



Data: EMSI
Analysis: Workforce Intelligence Network



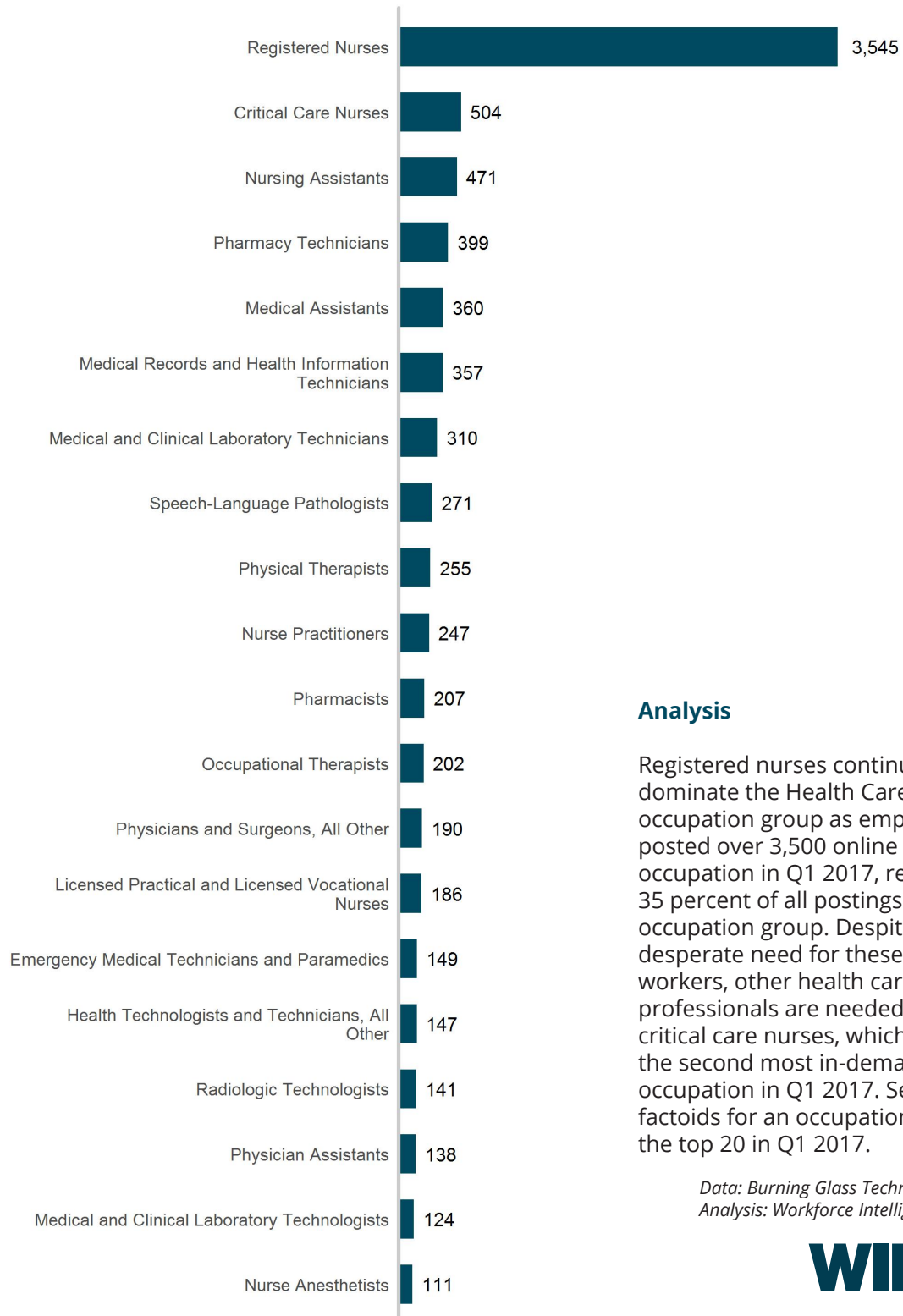
Record high Health Care
job postings



Record high Health Care
employment

Health Care Top Jobs

Quarter 1 2017



Analysis

Registered nurses continue to dominate the Health Care occupation group as employers posted over 3,500 online ads for this occupation in Q1 2017, representing 35 percent of all postings in this occupation group. Despite the desperate need for these types of workers, other health care professionals are needed, such as critical care nurses, which rose to be the second most in-demand occupation in Q1 2017. See the factoids for an occupation new to the top 20 in Q1 2017.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Nurse anesthetists is new to the top 20

78%

of postings indicate 0-2 years of experience wanted

Health Care Educational Attainment Required

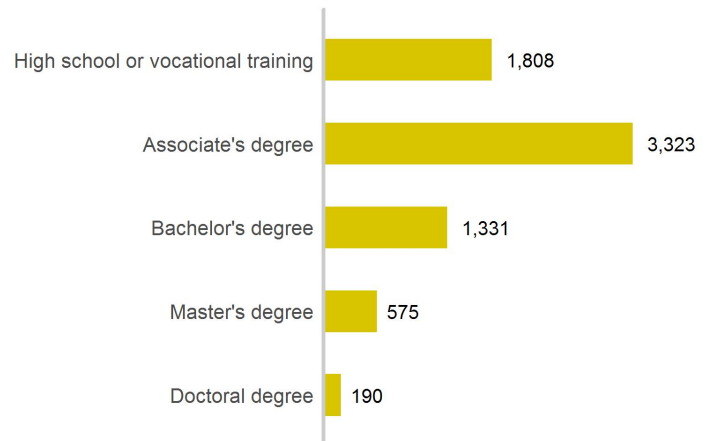
Unlike other occupation groups seen in this report, one form of educational attainment does not capture the majority of postings for Health Care occupations. An associate's degree was the most common form of education asked for by employers (46 percent of all postings with available data) via online ads in Q1 2017, followed by high school or vocational training at 1,808 postings. The 765 online postings asking for graduate or professional degrees can most likely be attributed to occupations like physicians and pharmacists which require years of education and training beyond a bachelor's.

In addition, the experience requirements for Health Care workers was also different from other occupation groups. An overwhelming majority (78 percent) of employers in Wayne County asked for zero to two years of experience from new employees. This indicates that with enough training or education individuals can immediately begin working in one of many in-demand Health Care fields.

In-Demand Area of Study

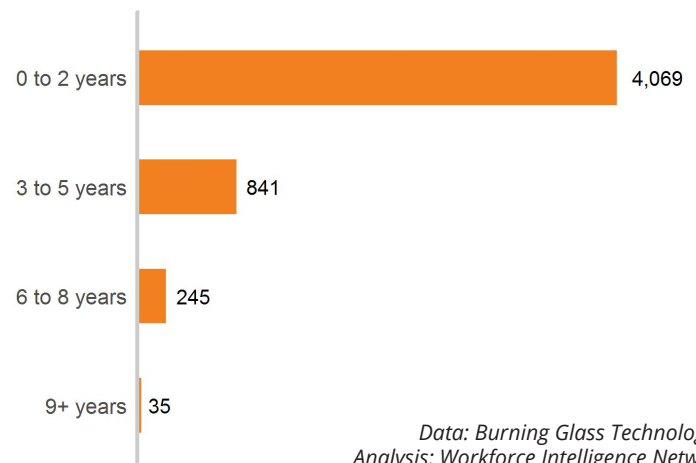
- Nursing Science
- Physical Therapy/Therapist
- Occupational Therapy/Therapist
- Clinical Laboratory Science/Medical Technology/Technologist
- Business Administration and Management, General

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Associate's degree highly
sought after



6th most in-demand program
of study is Health Professions

Health Care In-Demand Skills

The most often advertised baseline and specialized skills for Health Care occupations demonstrate that Wayne County employers seek workers with well-rounded foundational skills along with proficiency and expertise of specific health care skills, typically related to patients and patient care. Health Care workers must also be able to communicate effectively, work in teams, and problem solve.

Technical In-Demand Skills

- Patient Care/Patient Evaluation/Patient Preparation/Patient Monitoring
- Supervisory Skills/Teaching/Case Management
- CPR/ACLS/IR/EKG
- Therapy/Rehabilitation
- Clinical Experience

Foundational In-Demand Skills

- Communication Skills/Writing/Listening
- Team Work and Collaboration/Building Effective Relationships
- Problem Solving/Troubleshooting
- Critical Thinking/Analytical Skills
- Multi-Tasking

Job Type

- Full-time: 51%
- Part-time: 7%
- Temporary: 14%

Certifications Required

- Registered Nurse
- Critical Care Registered Nurse (CCRN)
- Basic Cardiac Life Support Certification
- Certified Nursing Assistant
- First Aid CPR AED



Nurse Practitioner is the 6th most in-demand certification



The 90th percentile wage for Physical Therapists: \$129,000 per year

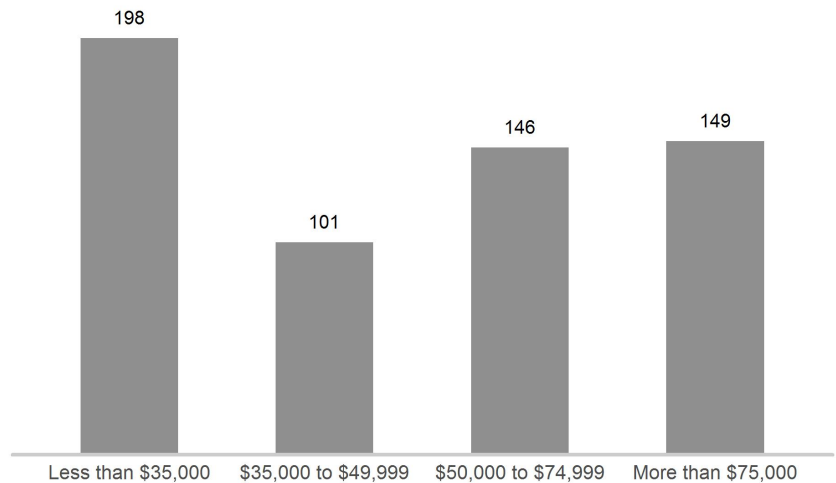
Health Care Wages

Advertised wages within Health Care postings showed more of a balance across wage ranges than other occupation groups. The majority (33 percent) of postings that specified a salary showed earnings of \$35,000 per year or less, but 25 percent of postings offered more than \$75,000 per year.

The inconsistency in wages for Health Care occupations can be seen in the wage table at the bottom of this page. About half of the top 10 occupations offer upwards of \$25 to \$30 per hour at entry level, while the other half offer between \$9 and \$12 per hour at entry level. Nursing assistants, which make the least at entry level, can still go on to make over \$36,500 per year at the 90th percentile.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
29-1141	Registered Nurses	\$25.13	\$28.55	\$33.18	\$38.42	\$46.58
31-1014	Nursing Assistants	\$9.96	\$11.65	\$13.46	\$15.52	\$17.56
29-1141	Critical Care Nurses	\$25.13	\$28.55	\$33.18	\$38.42	\$46.58
29-2071	Medical Records and Health Information Technicians	\$11.74	\$14.25	\$17.98	\$22.66	\$27.43
29-1069	Physicians and Surgeons, All Other	\$31.18	\$49.06	\$80.93	\$96.43	\$149.38
31-9092	Medical Assistants	\$10.78	\$12.34	\$14.06	\$16.32	\$18.78
29-2052	Pharmacy Technicians	\$10.04	\$11.90	\$14.61	\$17.31	\$19.25
29-1171	Nurse Practitioners	\$34.95	\$40.57	\$45.46	\$52.12	\$59.70
29-2012	Medical and Clinical Laboratory Technicians	\$10.79	\$12.75	\$15.28	\$19.12	\$27.00
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.

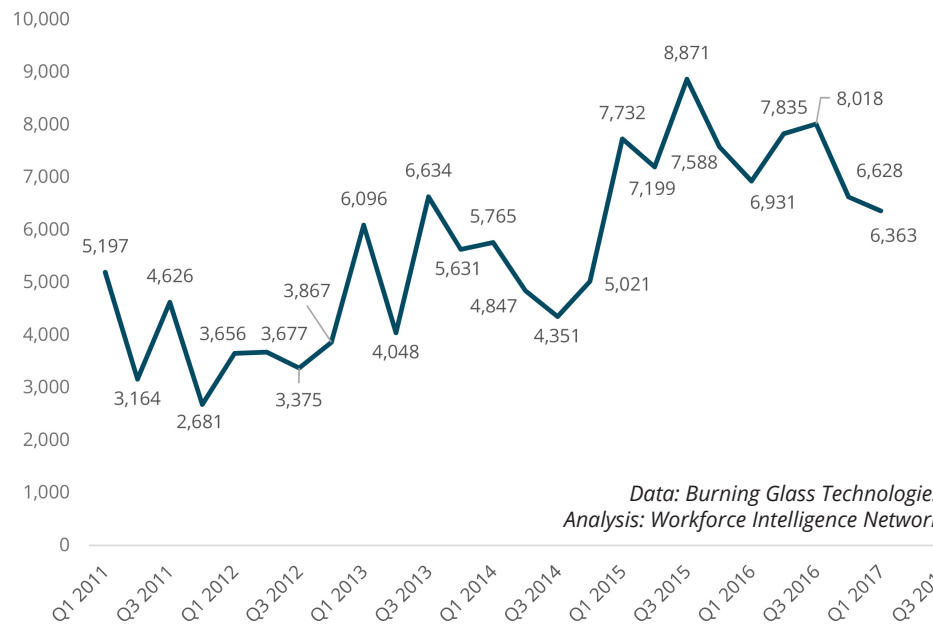
Job Posting Analysis

Online postings for IT occupations fell during Q1 2017 following Q4 2016. Employers posted 265 fewer ads in Q1 than in Q4 (-4 percent). Postings have been on a downward trend after peaking during Q3 2015.

Employment Analysis

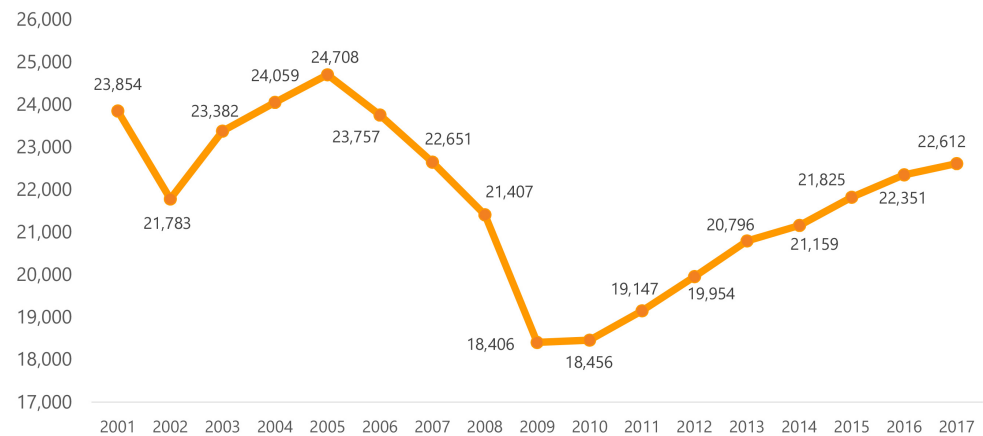
Employment for IT occupations continued its gradual climb –2017 marked an eighth consecutive year of growth. The nearly 22,612 workers in these jobs is the highest Wayne County has had since 2008. Employment has been nearing post-recession levels with an increasing trend seen each quarter.

Online Job Postings



Employment Over Time

Quarter 1 2017



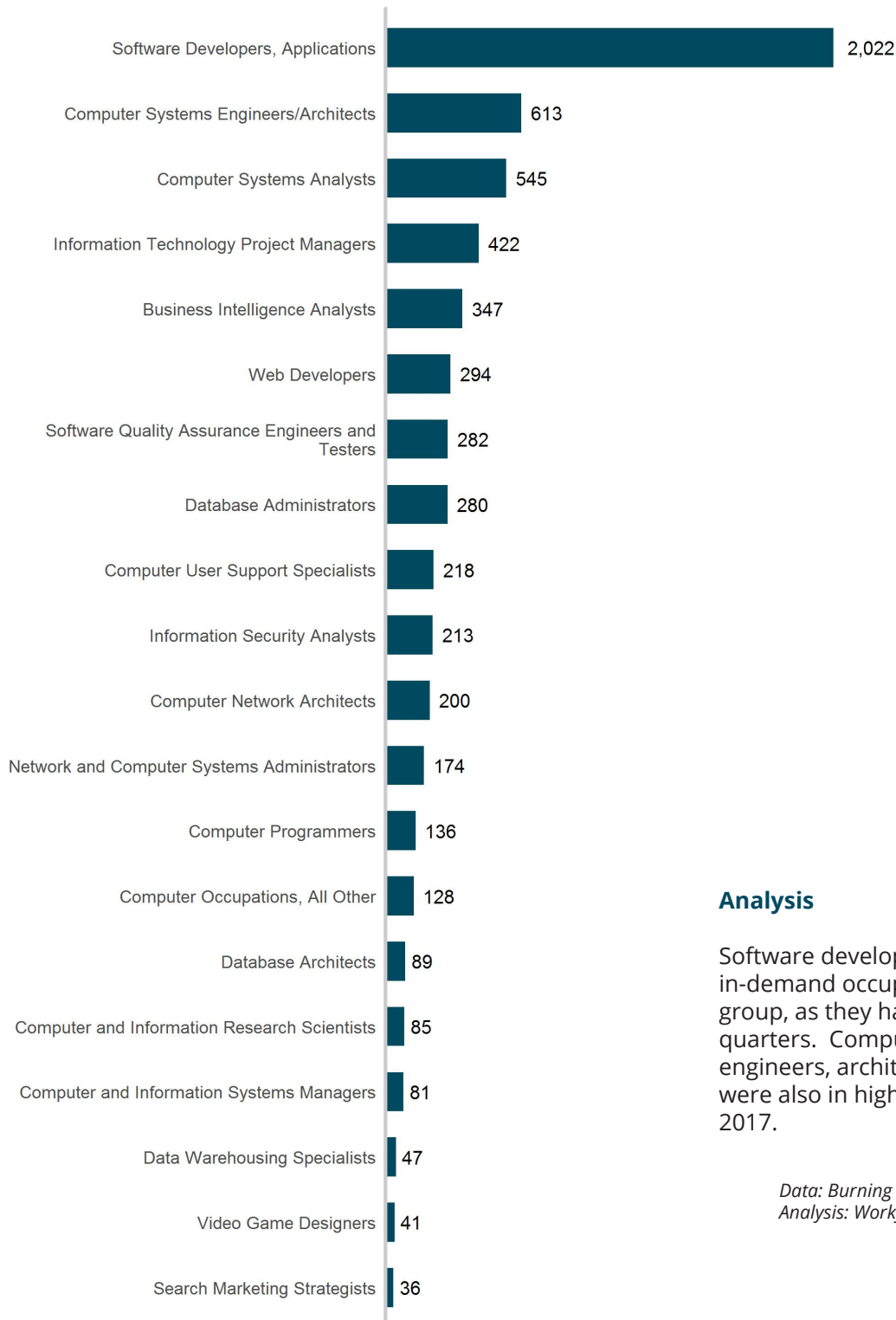


Software developers
top in-demand occupation



Now Hiring:
6,363 IT openings

Information Technology Top Jobs Quarter 1 2017



Analysis

Software developers were the most in-demand occupation within the IT group, as they have been for past quarters. Computer systems engineers, architects and analysts were also in high demand during Q1 2017.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Bachelor's degree
in-demand education



3-5 years of IT
experience wanted

Information Technology Educational Attainment Required

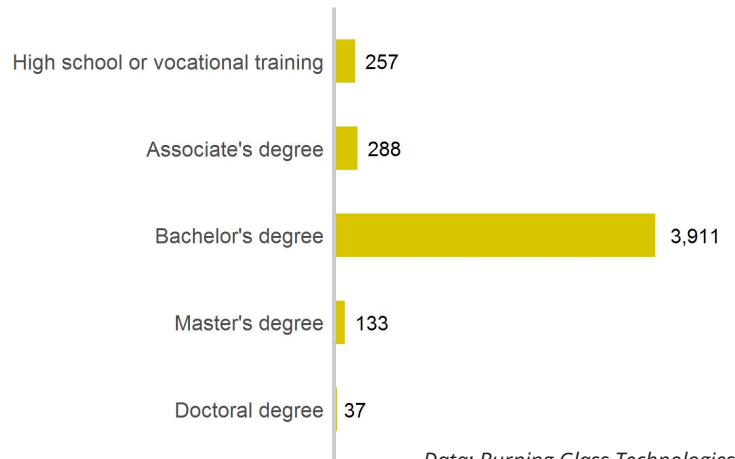
A vast majority of online postings that provided minimum education requirements asked that new employees have a bachelor's degree. About four and a half times more postings asked for a bachelor's degree than the other three educational attainment categories combined.

Of the postings that specified an experience level, most employers would prefer workers to have at least three to five years of experience. However, there are still opportunities for IT workers with less experience, with almost 1,000 online ads asking for zero to two years of experience.

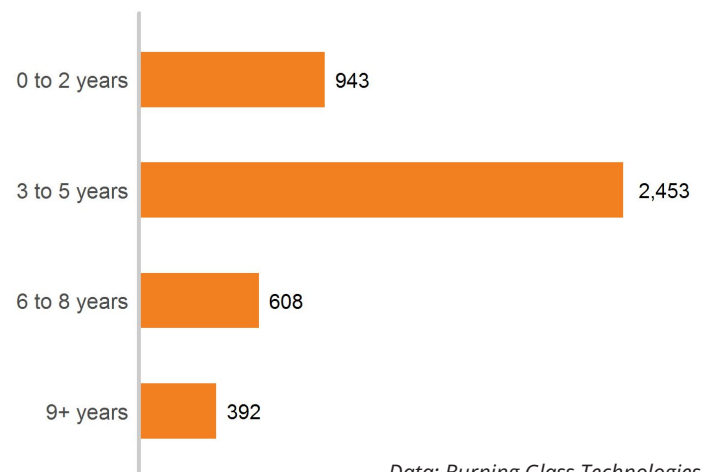
In-Demand Area of Study

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

Educational Attainment



Experience Required





SQL, JAVA, Oracle languages
in-demand



In-demand certifications:
CISSP, PMP

Information Technology In-Demand Skills

The most often advertised baseline and specialized skills for IT occupations demonstrate that Wayne County employers seek workers with well-rounded foundational skills, such as communication, problem solving and critical thinking. In addition, employers often look for workers that have expertise of a specific technical IT skills, typically a computer language such as JAVA or C++.

Technical In-Demand Skills

- SQL/JAVA/Oracle/JavaScript
- Software Development/Software Engineering
- Project Management
- Information Systems
- Software Engineering

Foundational In-Demand Skills

- Communication Skills/Presentation Skills
- Problem Solving/Troubleshooting
- Writing
- Planning
- Research

Job Type

- Full-time: 46%
- Part-time: 6.8%
- Temporary: 12%

Certifications Required

- Certified Information Systems Security Professional (CISSP)
- Project Management Certification (E.G. PMP)
- Certified Information Systems Auditor (CISA)
- SANS/GIAC Certification
- Cisco Certified Network Associate



Average Advertised salary:
\$94,861

79%
of specified postings offer
over \$75,000 per year

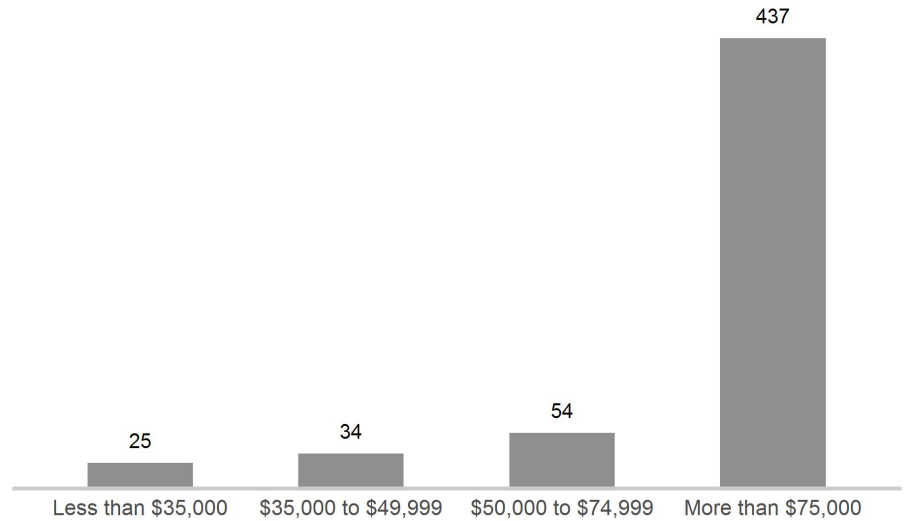
Information Technology Wages

The high demand and high level of skills necessary for IT occupations is demonstrated through the advertised salaries; the majority of postings that did specify a salary offered more than \$75,000 per year. There were nearly three times as many postings offering over \$75,000 per year than the other three wage categories, as seen to the right, combined.

Nearly all of the top IT occupations offer wages near or above \$40 per hour at the median level. One exception are web developers, which offers nearly \$22 per hour at the median level and require an Associate's degree.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
15-1132	Software Developers, Applications	\$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
15-1199	Computer Systems Engineers/Architects	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1199	Information Technology Project Managers	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1199	Business Intelligence Analysts	\$19.41	\$26.22	\$35.31	\$46.22	\$55.56
15-1134	Web Developers	\$17.84	\$20.97	\$26.29	\$32.47	\$38.64
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
15-1122	Information Security Analysts	\$24.92	\$29.70	\$41.41	\$50.49	\$59.52
15-1143	Computer Network Architects	\$35.87	\$42.58	\$51.30	\$59.64	\$70.77

Data: EMSI, BLS
Analysis: Workforce Intelligence Network



Skilled Trades & Technicians (Manufacturing Focused)

Introduction

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

NOTE: Skilled trades related to construction and assembly are not included in this cluster, as the focus is on advanced manufacturing only.

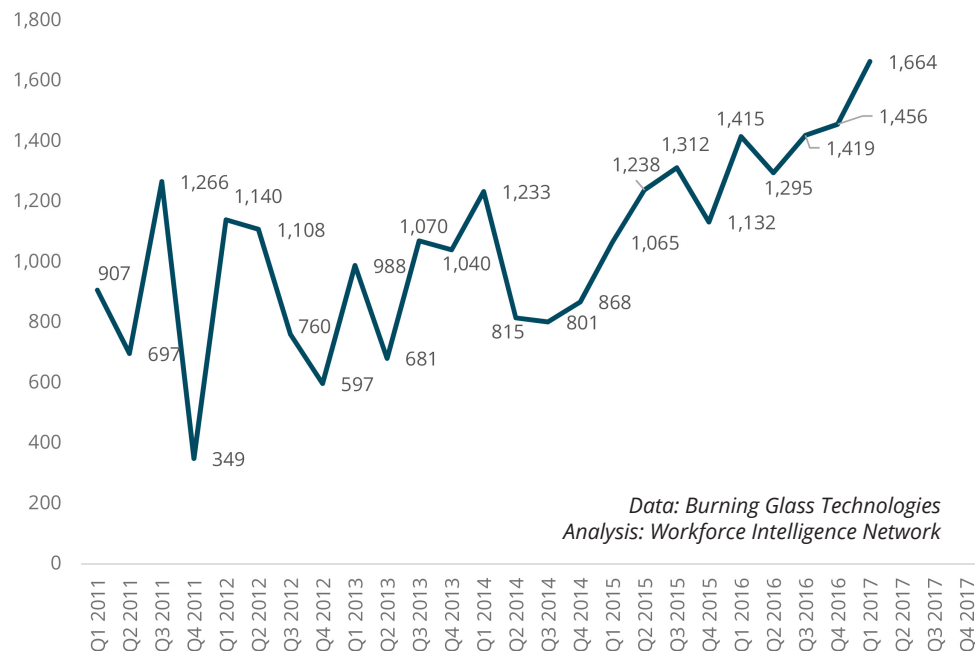
Job Posting Analysis

Online job postings for Skilled Trades and Technicians occupations rose for the fourth consecutive quarter with 1,664 ads in Q1 2017. With this 14 percent increase in postings from Q4 2016, employer demand in Wayne County is now at a record high. Postings for this occupation group have remained above 1,000 ads for two years, demonstrating not only higher levels of demand but also that employers utilize more advanced hiring methods to find talent.

Employment Analysis

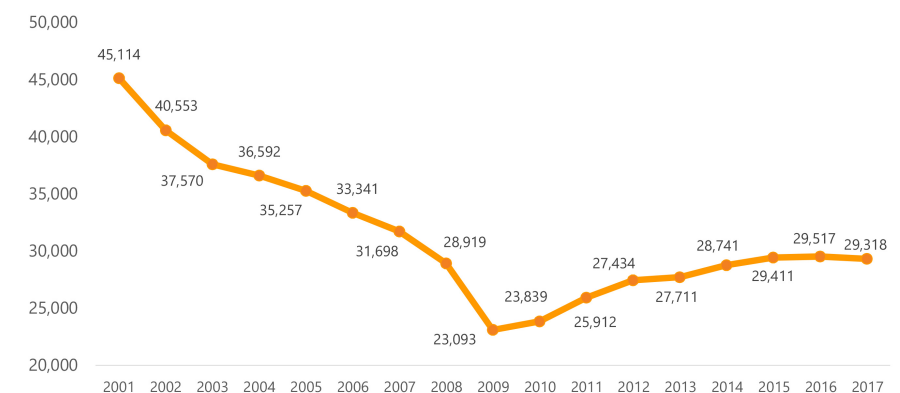
Employment for Skilled Trades and Technicians has decreased slightly into 2017, but remains above 2014 levels. During Q1 2017, this occupation group employed 29,318 individuals in Wayne County, just 0.7 percent below 2016. Employment in this occupation group is generally stable, but has yet to reach pre-recession levels.

Online Job Postings



Employment Over Time

Quarter 1 2017



Source: EMSI
Analysis: Workforce Intelligence Network

Data: EMSI
Analysis: Workforce Intelligence Network



Record high online job postings
in Q1 2017 (1,664 ads)

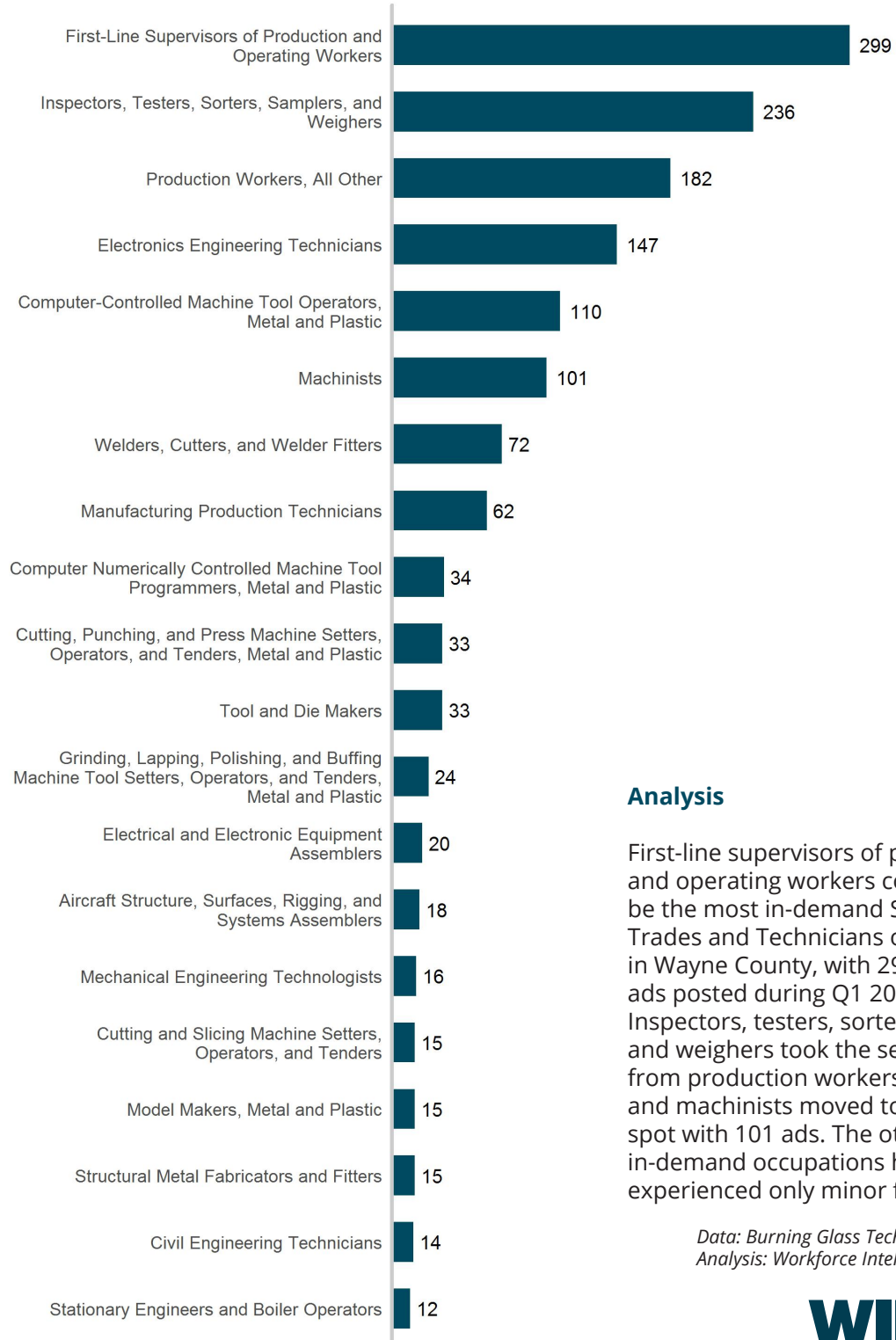


29,318 individuals employed in
Skilled Trades

Skilled Trades & Technicians

Top Jobs

Quarter 1 2017



Analysis

First-line supervisors of production and operating workers continue to be the most in-demand Skilled Trades and Technicians occupation in Wayne County, with 299 online ads posted during Q1 2017. Inspectors, testers, sorters, samplers and weighers took the second spot from production workers, now third, and machinists moved to the sixth spot with 101 ads. The other top 20 in-demand occupations have experienced only minor fluctuations.

Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Increased focus on
supervisory positions

78%

of postings specified education of high
school diploma or vocational training

Skilled Trades & Technicians Educational Attainment Required

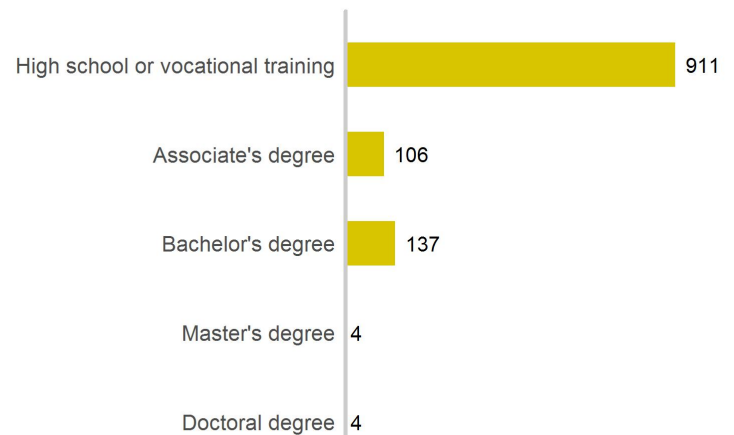
Of the 1,162 online job postings that specified educational attainment requirements, 78 percent showed that a high school diploma or vocational training would be sufficient. Another 12 percent indicated a bachelor's degree as a requirement, most likely for supervisory or management positions.

Meanwhile, nearly all postings specifying experience levels sought candidates with five or fewer years of experience. 48 percent of the postings indicated that three to five years of experience were ideal, although postings seeking entry level workers with under two years followed closely. This increase in employers seeking more experienced workers, alongside the advertised preference for management-related degrees and supervisory skills, reflects the rise in production supervisor roles over the last two quarters.

In-Demand Area of Study

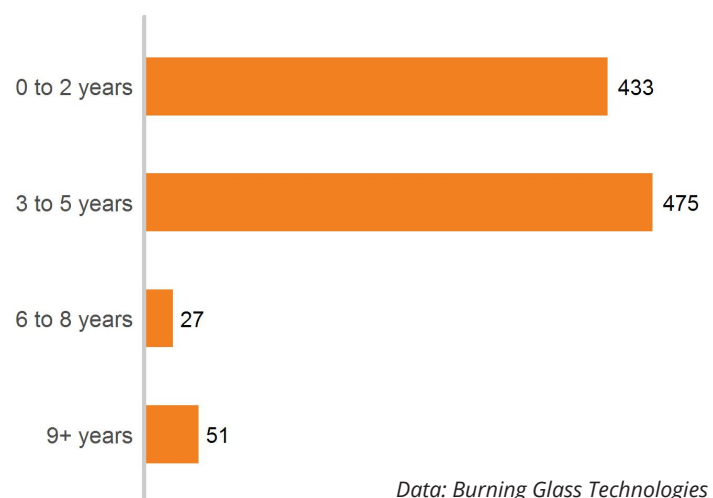
- Engineering
- Computer Science
- Electrical and Electronic Engineering
- Business Administration and Management, General
- Management Information Systems

Educational Attainment



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Experience Required



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network



Inspection and repair skills
highly valued

92%

of postings asked for
0-5 years of experience

Skilled Trades & Technicians In-Demand Skills

The most often advertised baseline and specialized skills for Skilled Trades and Technicians demonstrate that Wayne County employers seek workers with well-rounded foundational skills, such as communication and problem solving, among other soft skills. In addition, employers ask that workers have expertise in traditional or new skilled trade practices, like machine operation and equipment calibration.

Technical In-Demand Skills

- Inspection/repair
- Computer Numerical Control (CNC)
- Machining
- Supervisory skills/scheduling
- Microsoft Office

Foundational In-Demand Skills

- Communication skills
- Troubleshooting/problem solving
- Ability to perform physical labor
- Mathematics
- Computer skills

Job Type

- Full-time: 64.8%
- Part-time: 2.0%
- Temporary: 6.5%

Certifications Required

- Cash Handling Certification
- Forklift Operator Certification
- Automotive Service Excellence (ASE) Certification
- Commercial Driver's License (CDL)
- Boiler Operator License

21%
of specified postings indicate
an annual salary of >\$50,000


Manufacturing production
technicians can earn over \$31 hourly

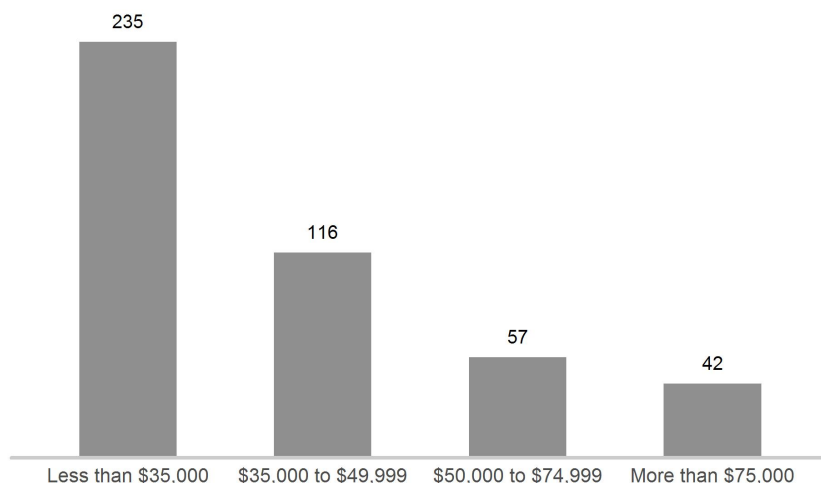
Skilled Trades & Technicians Wages

Unlike most of the other occupation groups, the majority (52 percent) of online postings that specify a salary for Skilled Trades and Technicians show earnings of below \$35,000 per year. An additional 26 percent of job postings offered wages between \$35,000 and \$50,000 annually, with only 9 percent offering wages over \$75,000 annually. The mean advertised salary was \$42,231 during Q1.

Compared to other occupation groups, the overall top ten in-demand Skilled Trades occupations offer a lower entry level wage, anywhere between \$10 and \$20 per hour. However, median wages are more competitive; all are over \$15 hourly, and both top job first-line supervisors of production and operating workers as well as manufacturing production technicians earn near \$30 hourly.

Advertised Wages in Job Postings

Quarter 1 2017



Data: Burning Glass Technologies
Analysis: Workforce Intelligence Network

Wage Data from Bureau of Labor Statistics 2016

Occupation Code	Occupation Name	10th Percentile Wages	25th Percentile Wages	Median Wages	75th Percentile Wages	90th Percentile Wages
51-1011	First-Line Supervisors of Production and Operating Workers	\$17.40	\$22.18	\$29.48	\$38.86	\$47.50
51-9061	Inspectors, Testers, Sorters, Samplers, and Weighers	\$9.81	\$11.55	\$15.46	\$21.68	\$28.32
51-9199	Production Workers, All Other	\$10.77	\$13.64	\$16.54	\$18.93	\$24.89
17-3023	Electronics Engineering Technicians	\$15.77	\$19.62	\$24.77	\$31.12	\$36.94
51-4011	Computer-Controlled Machine Tool Operators, Metal and Plastic	\$11.38	\$13.62	\$18.70	\$23.08	\$28.44
51-4041	Machinists	\$12.71	\$15.79	\$19.49	\$24.55	\$29.91
51-4121	Welders, Cutters, and Welder Fitters	\$12.73	\$15.15	\$17.87	\$22.25	\$28.27
17-3029	Manufacturing Production Technicians	\$20.49	\$26.65	\$31.91	\$36.96	\$44.69
51-4012	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	\$16.84	\$20.04	\$24.64	\$29.31	\$33.34
51-4031	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	\$10.39	\$12.37	\$16.35	\$24.00	\$27.39

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	802,754	774,443	771,845	774,235	767,938	759,665	773,086	784,224	11,138	1.4%
Employment	678,426	674,177	681,453	685,354	693,905	707,007	723,788	733,682	9,894	1.4%
Unemployment	124,328	100,266	90,392	88,882	74,033	52,659	49,298	50,542	1,244	2.5%
Unemployment Rate	15.5%	12.9%	11.7%	11.5%	9.6%	6.9%	6.4%	6.4%	0.1%	na

**Note: Monthly data averaged by year*

Data: Bureau of Labor Statistics

Quarterly Labor Market Data

	1st Quarter 2016	2nd Quarter 2016	3rd Quarter 2016	4th Quarter 2016	1st Quarter 2017	Change from 4th Quarter 2016	Percent Change from 4th Quarter 2016	One-Year Change from 1st Quarter 2016	One-Year Percent Change from 1st Quarter 2016
Labor Force	765,514	765,910	784,699	776,222	784,224	8,002	1.0%	18,710	2.4%
Employment	718,222	720,609	727,551	728,768	731,104	2,336	0.3%	12,882	1.8%
Unemployment	47,291	45,301	57,148	47,453	53,119	5,666	11.9%	5,828	12.3%
Unemployment Rate	6.2%	5.9%	7.3%	6.1%	6.8%	0.7%	na	0.6%	na

**Note: Monthly data averaged by quarter*

Data: Bureau of Labor Statistics


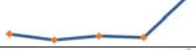
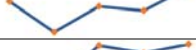



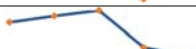




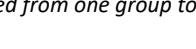
Monthly Labor Market Data

	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	760,491	764,686	771,364	758,877	765,253	773,600	784,456	784,624	785,017	783,010	772,640	773,015	782,825	785,917	783,929
Employment	713,648	718,818	722,201	717,741	722,626	721,459	724,583	726,695	731,376	728,313	728,938	729,054	725,950	730,596	736,767
Unemployment	46,843	45,868	49,163	41,136	42,627	52,141	59,873	57,929	53,641	54,697	43,702	43,961	56,875	55,321	47,162
Unemployment Rate	6.2%	6.0%	6.4%	5.4%	5.6%	6.7%	7.6%	7.4%	6.8%	7.0%	5.7%	5.7%	7.3%	7.0%	6.0%

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

Data: Bureau of Labor Statistics

Wayne 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	55,886	54,770	58,610	55,365	58,903		5.4%	7.5%
Agriculture	664	640	656	650	817		23.0%	27.7%
Business & finance	3,931	3,776	3,906	3,884	4,003		1.8%	6.0%
Construction	371	387	502	479	506		36.4%	30.7%
Customer service	11,648	11,357	12,443	12,303	35,398		203.9%	211.7%
Education	765	780	951	1,180	960		25.5%	23.1%
Energy	131	145	121	114	164		25.2%	13.1%
Engineers & designers	3,129	3,232	3,324	2,727	2,591		-17.2%	-19.8%
Health care	8,272	7,849	8,559	8,111	10,191		23.2%	29.8%
Information technology	6,931	7,835	8,018	6,628	6,363		-8.2%	-18.8%
Skilled trades & technicians	1,415	1,295	1,419	1,456	1,664		17.6%	28.5%
Transportation, distribution, and logistics	4,102	4,260	4,841	4,398	4,593		12.0%	7.8%

**Note: Some overlap exists between groups, the occupational groups are not mutually exclusive. Thus, postings should not be added from one group to another but instead should be analyzed on their own.*

Website

www.WINintelligence.org

Email

info@win-semich.org

Phone

313.744.2946

Address

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

Facebook

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

Twitter

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