

# Occupational Employment and Wages, 2015

A Detailed Analysis of New Jersey's Occupational Landscape

Published March 2017



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#### **Preface**

The New Jersey Department of Labor and Workforce Development, in conjunction with the U.S. Bureau of Labor Statistics (BLS), conducts the Occupational Employment Statistics (OES) Wage Survey on a semi-annual basis, mailing OES survey forms to a sample of business establishments throughout the state.

Employers receiving the survey are strongly encouraged to participate since the quality and the level of detail that can be provided from this survey depends on the cooperation received from the employer community. Wage data are published for specific areas and/or industries only if there are enough responses to ensure both the reliability of the data and the confidentiality of the respondents.

The wage data provided here are possible due to thousands of New Jersey employers who participated in the OES Wage Survey. The wage and employment data collected in the OES Wage Survey provide valuable input for wage comparisons and for identifying trends in emerging or declining occupations -- precisely the kind of information needed by employers. Wage comparisons between areas are useful for new companies in selecting a location or for established companies looking to relocate. In addition, people often consult these data when choosing or changing careers, entering the job market, or relocating to another area. Likewise, career counselors use this information when advising people on occupational choices.

Occupational wage data is estimated from data collected through six surveys over the past three years.

The OES Survey uses the Standard Occupational Classification (SOC) system, which was designed to be used by all Federal statistical agencies reporting occupational data. Current estimates utilize the 2010 SOC, in which there are approximately 820 detailed occupational classifications. For more information about the SOC system, see the SOC page of the BLS website at <a href="http://www.bls.gov/soc/">http://www.bls.gov/soc/</a>.





#### **Preface**

This current release of the OES survey estimates publishes area estimates using the Metropolitan Statistical Area (MSA) configurations based on the 2010 Census. Many of New Jersey's ten sub-state MSA configurations are "cross-state" areas comprised of counties from two or more states. In those instances, the data presented here is representative of only the New Jersey portion of the MSA. For example, the entire "Allentown-Bethlehem-Easton, PA-NJ MSA" is comprised of Warren County, NJ and three Pennsylvania counties. The data for the "Warren County Labor Area" that is available on the New Jersey Labor and Workforce Development's web site at

http://lwd.dol.state.nj.us/labor/lpa/employ/oeswage/oeswage\_index.html covers only the New Jersey portion of that MSA. For more information on Metropolitan Statistical Areas, visit the BLS website for MSA definitions at http://www.bls.gov/oes/current/msa\_def.htm.

The OES survey is conducted in all 50 states, the District of Columbia, Guam, Puerto Rico, and the Virgin Islands in conjunction with the BLS and the U.S. Employment and Training Administration (ETA). Prior to 1996, the OES survey collected employment data by occupation but not wage data. This addition has resulted in occupational wage data of greater quality and consistency than ever before available.

The stringent requirements of the OES survey, in terms of a statistically valid sample and methodology, combined with consistent survey forms and definitions, has resulted in quality wage data for hundreds of occupations that are truly comparable across all states and metropolitan areas. This is in direct contrast to previously available occupational wage data which existed for only a limited number of occupations and originated from a variety of different surveys, each collected over differing time periods using different questionnaires, methodologies, occupational titles and definitions.

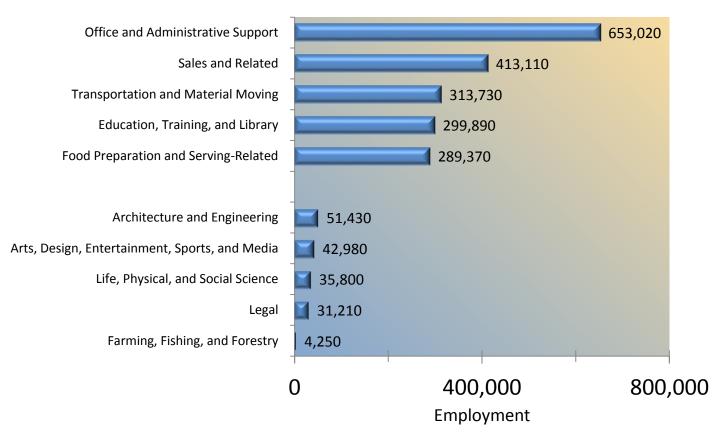




# The top five occupational groups account for more than half of all employment while the bottom five groups accounts for less than five percent

#### **Overview**

### Employment for largest and smallest occupational groups, New Jersey 2015



Office and administrative support occupations continued to be the largest occupational group in New Jersey in 2015, accounting for nearly 17 percent of all employment. Four of the top ten largest detailed occupations are classified in this group.

Among the top five occupational groups, only education, training and library occupations earned an average salary greater than the statewide average of \$54,950.

The smallest five occupational groups comprised less than 5 percent of all employment in New Jersey. However, all but farming, fishing and forestry occupations earned an above average annual salary.

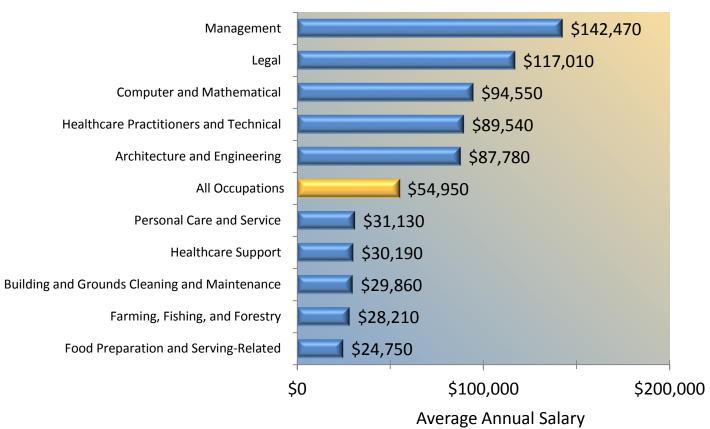




## The management and legal occupational groups each earn average annual salaries well over six figures

#### **Overview**

### Mean annual salary for highest and lowest paid major occupational groups, New Jersey 2015



Management occupations earn nearly triple the statewide average salary and nearly six times more than the lowest paying occupational group, food preparation and serving related occupations.

Computer and mathematical and architecture and engineering occupations, both classified as STEM occupations, each earn average salaries well above the statewide average.

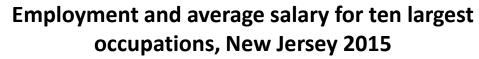
Four of the five lowest paying occupational groups are classified as service occupations. Only farming, fishing and forestry occupations fall outside this group.

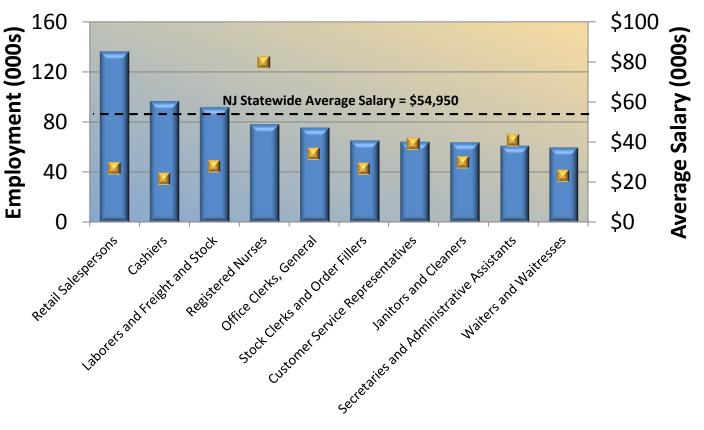




### Registered nurse is the only occupation among the top ten in terms of employment that earned an annual salary higher than the statewide average

### Overview





There are nearly 233,200 retail salespersons and cashiers combined employed in New Jersey. This represents 6 percent of all employment in the state. Those employed in these occupations are often paid on an hourly basis, with averages of \$12.90 and \$10.40 per hour, respectively.

Most of the occupations on this list are classified as either service, sales or administrative support occupations.

The employment from these ten occupations combined accounts for more than 20 percent of all employment in the state.







## Many of lowest paying occupations in New Jersey require very little education and experience for entry

### Hourly Wage and Employment of Lowest Paying Occupations New Jersey, 2015

Occupation	Hourly Wage	Employment
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	\$9.50	24,680
Shampooers	\$9.55	2,090
Automotive and Watercraft Service Attendants	\$9.85	10,300
Amusement and Recreation Attendants	\$10.00	7,390
Dishwashers	\$10.05	10,170
Dining Room and Cafeteria Attendants and Bartender Helpers	\$10.10	9,360
Cashiers	\$10.40	96,810
Combined Food Preparation and Serving Workers, Including Fast Food	\$10.40	53,070
Lifeguards, Ski Patrol, and Other Recreational Protective Service Workers	\$10.65	4,130
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$10.70	9,340





#### **Overview**

Five of the ten lowest paying occupations in New Jersey in 2015 were in the food services occupational group. It is notable that like many service occupations, gratuities can be a significant portion of the worker's income. While the OES survey attempts to account for this, it is understood that actual worker pay may be higher than the hourly wages reported.

Automotive and watercraft service attendants (e.g. gas station attendants) are a relatively common occupation in New Jersey and Oregon, the only two states where customers cannot pump their own gasoline. There are over 10,000 of them in New Jersey.

### On the contrary, the highest paying occupations almost always require very advanced degrees and extensive experience

### Annual Salary and Employment of Highest Paying Occupations New Jersey, 2015

Occupation	Annual Salary	Employment
Oral and Maxillofacial Surgeons	\$279,010	340
Anesthesiologists	\$271,690	1,240
Orthodontists	\$233,180	270
Psychiatrists	\$217,690	740
Internists, General	\$210,850	1,570
Obstetricians and Gynecologists	\$204,840	580
Physicians and Surgeons*	\$196,540	15,960
Nurse Anesthetists	\$184,320	570
Petroleum Engineers	\$180,440	300
Family and General Practitioners	\$174,080	2,790

<sup>\*</sup> Includes Physicians and Surgeons, All Other (SOC 29-1069)





#### **Overview**

The list of the highest paying occupations in New Jersey is largely comprised of physicians and other advanced medical professionals. Each of these healthcare practitioner occupations requires not only a doctoral degree, but also extensive post-graduation experience.

The only occupation on this list that is not related to healthcare is petroleum engineer. While only a Bachelor's degree is required, a Master's degree in at least one field of engineering is often preferred.

# Many of the highest paying occupations outside of management and healthcare are classified as legal and STEM occupations

### Employment and average annual salary of select high paying occupations excluding healthcare and management, New Jersey 2015

Occupation	Annual Salary	Employment
Petroleum Engineers	\$180,440	300
Postsecondary Law Teachers	\$163,140	420
Judges, Magistrate Judges, and Magistrates	\$161,910	1,020
Lawyers	\$145,970	19,900
Supervisors of Police and Detectives	\$127,160	2,590
Computer and Information Research Scientists	\$123,190	1,300
Personal Financial Advisors	\$122,290	6,360
Aerospace Engineers	\$118,240	340
Computer Network Architects	\$117,770	6,210
Biomedical Engineers	\$114,550	570

<u>S</u>cience

<u>T</u>echnology

Engineering

Math



The three occupations on this list associated with law (postsecondary law teachers are actually classified with education) each require a postsecondary professional degree plus extensive experience.

The remaining seven occupations require a minimum of a bachelor's degree for entry, five of which are considered to be STEM occupations.

Supervisors of police and detectives and personal financial advisors fall outside each of these classifications among high earning occupations in New Jersey.

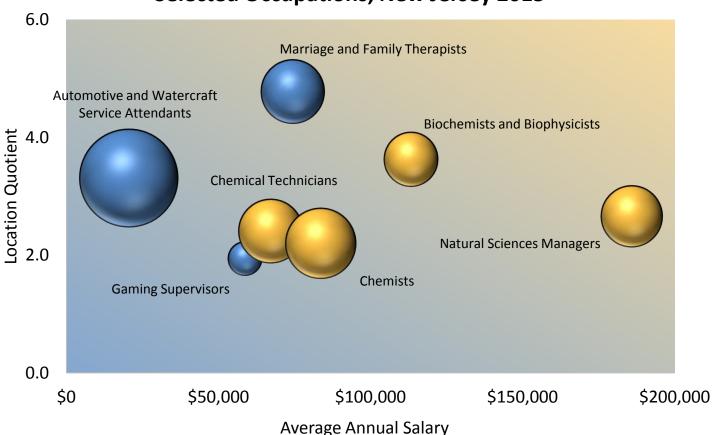




### These occupations have a strong presence in New Jersey relative to other states in 2015

#### **Overview**

### Location Quotient, Average Salary, and Employment of Selected Occupations, New Jersey 2015



Simply, a location quotient significantly higher than 1.0 indicates that an occupation has a strong presence in a given area as compared to that same occupation's presence at the national level.

Most of the occupations illustrated on this chart earn a salary above the statewide average of \$53,920

Four of these occupations (highlighted in gold) are STEM occupations and are commonly found working in New Jersey's robust chemical manufacturing industry, which includes one of the leading pharmaceutical industries in the country.

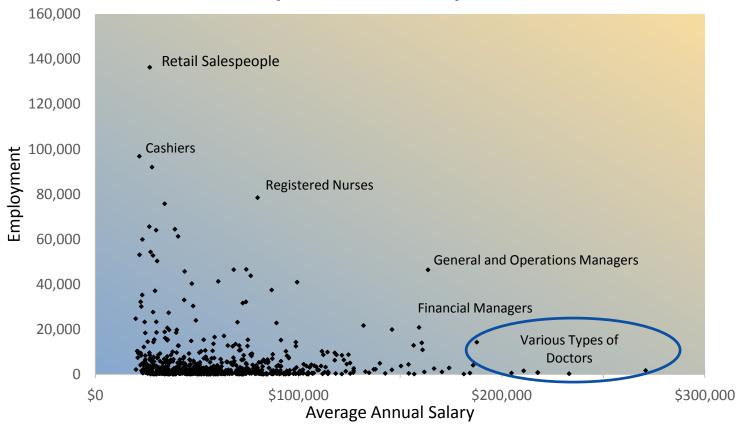






# The plots on this chart represent the employment and average annual salary for each of the 820 detailed occupations found in New Jersey

### Employment and Average Annual Salary by Detailed Occupation, New Jersey 2015







#### **Overview**

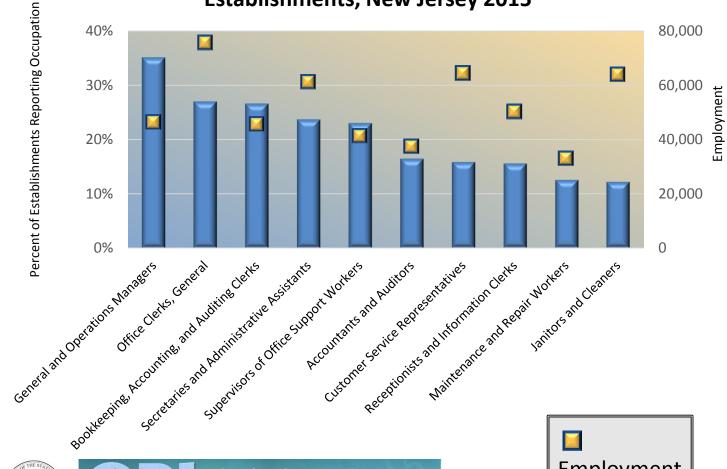
There are 42 occupations in New Jersey with employment of at least 20,000 in 2015.
Combined, they account for over 1.9 million in employment, or 49 percent of all jobs in the state.

There are 81 occupations with an average annual salary exceeding \$100,000. Combined, they account for just 341,650 in employment, or nearly 9 percent of all employment.

There are three occupations with employment of at least 20,000 and average earnings exceeding \$100,000; general and operations managers and financial managers

### This chart shows the top ten most commonly reported occupations by business establishments in **New Jersey in 2015**

### **Occupations Most Often Reported in Business Establishments, New Jersey 2015**



#### **Overview**

These top ten most commonly reported occupations make up about 13 percent of all employment in the state.

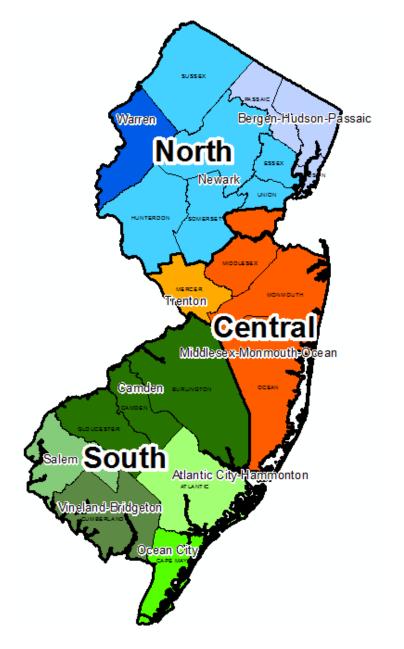
General and operations managers are the only occupation found in more than one-third of all business establishments in New Jersey.

Office and administrative support occupations are among those most frequently reported because they are likely to be found in establishments from many different industries. The same logic would apply to janitors and cleaners and maintenance and repair workers.

**Employment** 







# REGIONAL FOCUS





# The occupational composition and compensation are often quite unique among New Jersey's three regions, reflecting the very different economies within the state



Employment and Average Salary by Region All Occupations in New Jersey, 2015

### **Northern Region**

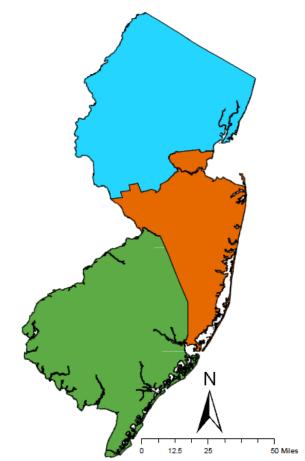
2,052,220 Employed \$57,010 Average Salary

#### **Central Region**

1,060,710 Employed \$55,140 Average Salary

### **Southern Region**

748,490 Employed \$48,590 Average Salary



More than half (52.5 percent) of all employment in New Jersey is found in the ten counties that make up the northern region of the state. While slightly smaller in terms of land area than the southern region, it is far more densely populated. There are 744 workers per square mile in the north versus only 252 workers per square mile in the south.

On average, the annual salary earned among all occupations is higher in the northern and central regions than in the south.





## There are more than one million employed in occupations that require at least a bachelor's degree in New Jersey



Employment and Average Salary by Region
Occupations Requiring At Least a Bachelor's Degree

### **Northern Region**

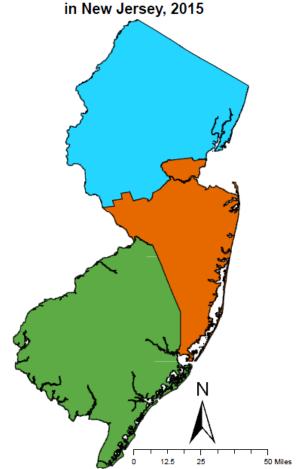
570,870 Employed \$98,480 Average Salary

#### **Central Region**

288,840 Employed \$95,540 Average Salary

### **Southern Region**

150,840 Employed \$86,890 Average Salary



The average annual salary of these occupations in New Jersey exceed \$95,000, nearly double the statewide average.

Approximately 85 percent of this employment is found in the northern and central regions where industries like chemical manufacturing, corporate headquarters, and finance are more often located.

The average annual salary of these workers is also much higher in the northern and central regions





# Occupations that <u>require a high school diploma or less</u> generally earn average salaries far below the statewide average of \$54,950



Employment and Average Salary by Region Occupations Requiring High School Diploma or Less in New Jersey, 2015

### Northern Region

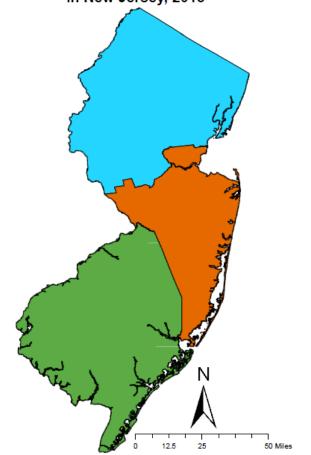
1,212,750 Employed \$38,170 Average Salary

#### **Central Region**

616,750 Employed \$37,140 Average Salary

### **Southern Region**

448,510 Employed \$35,680 Average Salary



These types of occupations are found in all parts of the state and there is far less difference in compensation from region to region.

While these occupations can be found in nearly every industry, they are most commonly found among hospitality, food service, and retail trade employers.

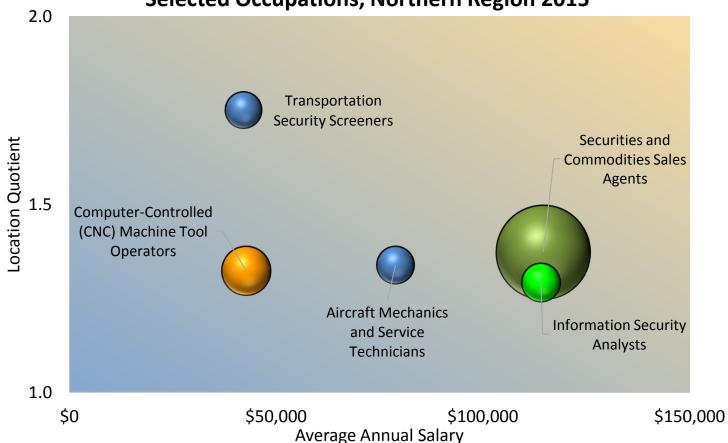




# The occupations below are most likely to be employed in the northern region of New Jersey



Location Quotient, Average Salary, and Employment of Selected Occupations, Northern Region 2015

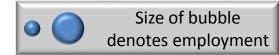


Largely due to its close proximity to New York
City, the industry composition of the northern region includes a robust financial sector.
Occupations like securities and commodities sales agents and information security analysts provide employment opportunities with salaries in excess of \$100,000.

Newark Liberty
International Airport is
the largest airport in the
state. Transportation
security screeners and
aircraft mechanics are
essential to its operation
and more likely to be
employed in the north
than any other region.







## The list below highlights some of the highest paying occupations in the northern region



### Average annual salary and employment of select high paying occupations, Northern New Jersey 2015

Occupation	Annual Salary	Employment
Personal Financial Advisors	\$125,570	4,210
Securities and Commodities Sales Agents	\$114,590	7,380
Information Security Analysts	\$114,030	1,270
Biochemists and Biophysicists	\$113,660	2,000
Financial Analysts	\$100,150	5,410
Computer Systems Analysts	\$100,090	8,730
Postsecondary Nursing Instructors	\$89,380	1,020
Accountants and Auditors	\$88,290	22,750
Logisticians	\$81,450	2,790
Aircraft Mechanics and Service Technicians	\$78,870	1,210

Many of the highest paying occupations are directly linked to the large financial sector. Personal financial advisors, securities and commodities sales agents, and financial analysts each earned an average annual salary exceeding \$100,000 in 2015.

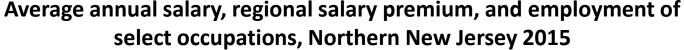
Logisticians and aircraft mechanics are commonly employed in the transportation, logistics, and distribution sector.

Newark Liberty
International Airport and its neighboring seaports manage the transportation of billions of dollars worth of goods every year.





# Data shows that the occupations below earn higher salaries in the north than in any other region



			-	
Occupation	Annual Salary	Salary Difference	Employment	Education
Systems Software Developers	\$127,070	+ \$24,160	4,870	Bachelor's degree
Lawyers	\$157,090	+ \$22,900	11,440	Doctoral or professional degree
Aircraft Mechanics and Service Technicians	\$78,870	+ \$18,320	1,210	Postsecondary nondegree award
Financial Analysts	\$100,150	+ \$17,640	5,410	Bachelor's degree
Reservation and Transportation Travel Clerks	\$38,750	+ \$13,560	2,180	High school diploma or equivalent
Biochemists and Biophysicists	\$113,660	+ \$13,020	2,000	Doctoral or professional degree
Personal Financial Advisors	\$125,570	+ \$11,760	4,210	Bachelor's degree
Claims Adjusters, Examiners, and Investigators	\$75,250	+ \$8,300	5,720	High school diploma or equivalent
Civil Engineers	\$99,590	+ \$8,300	3,360	Bachelor's degree
Industrial Engineers	\$93,870	+ \$6,210	1,840	Bachelor's degree



Most of the occupations on this list require at least a Bachelor's degree.

Systems software developers and lawyers both earn greater than \$20,000 more in the northern region than their counterparts in the central or southern regions.

Both civil and industrial engineers that are employed in the northern region earn far more than in other parts of the state.

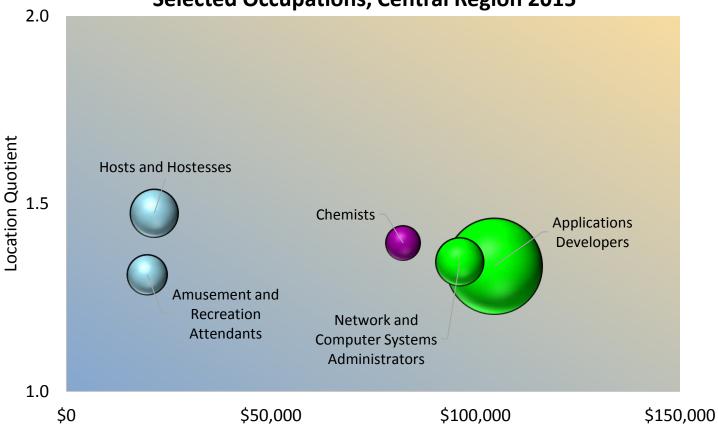




# These occupations are most likely to be employed in the central region than other parts of New Jersey



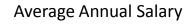
Location Quotient, Average Salary, and Employment of Selected Occupations, Central Region 2015



The central region offers a very diverse industrial composition ranging from pharmaceutical manufacturing and information technology to state government in the Capitol of Trenton and leisure and hospitality along the region's coastline of barrier islands.

This four county region is the smallest by land area of the three, but still employed over 1,000,000 people in 2015.

The region's 2,000 chemists earned an average salary of \$82,300 in 2015









# Many of the highest paying occupations in the central region are classified as computer occupations



### Average annual salary and employment of select high paying occupations, Central New Jersey 2015

Occupation	Annual Salary	Employment
Applications Developers	\$104,580	14,820
Systems Software Developers	\$101,140	3,580
Physical Therapists	\$101,090	2,210
Management Analysts	\$100,170	4,240
Computer Systems Analysts	\$97,140	4,170
Network and Computer Systems Administrators	\$96,170	3,730
Civil Engineers	\$91,250	2,600
Computer Programmers	\$90,910	4,990
Industrial Engineers	\$87,660	1,100
Chemists	\$82,310	2,000

There are wide ranging opportunities in the central region to earn a salary far above the statewide average of \$54,950.

There are nearly 15,000 applications developers employed in the central region who earn an average salary of nearly \$105,000.

There are nearly 4,000 combined civil and industrial engineers employed in these four counties who earned average salaries of \$91,250 and \$87,660, respectively.





# These ten occupations earn a significantly higher salary in the central region of the state than the other two regions



### Average annual salary, regional salary premium, and employment of select occupations, Central New Jersey 2015

	<u> </u>		<u> </u>	
Occupation	Annual Salary	Salary Difference	Employment	Education
Computer Network Architects	\$134,220	+ \$24,020	1,630	Bachelor's degree
Sales Engineers	\$113,600	+ \$19,510	610	Bachelor's degree
Public Relations Specialists	\$66,530	+ \$9,150	1,220	Bachelor's degree
Plumbers, Pipefitters, and Steamfitters	\$75,220	+ \$8,790	1,660	High school diploma or equivalent
Mechanical Engineers	\$97,400	+ \$8,440	1,590	Bachelor's degree
Electrical Engineers	\$111,030	+ \$8,380	1,270	Bachelor's degree
Physical Therapists	\$101,090	+ \$7,620	2,210	Doctoral or professional degree
Applications Developers	\$104,580	+ \$7,220	14,820	Bachelor's degree
Real Estate Sales Agents	\$65,480	+ \$5,470	760	High school diploma or equivalent
Light Truck or Delivery Drivers	\$37,560	+ \$4,470	7,310	High school diploma or equivalent

Data shows that computer network architects earn \$24,000 more annually in the central region, a premium of greater than 20 percent.

Mechanical and electrical engineers each require at least a Bachelor's degree, and earn more than \$8,000 a year more than in the northern or southern regions.

Real estate sales agents and light truck and delivery drivers both have relatively lower educational requirements, yet earn significantly more than in other areas of the state.





# These five occupations are far more likely to be employed in southern New Jersey than in other areas of the state



Location Quotient, Average Salary, and Employment of Selected Occupations, Southern Region 2015

2.0 Hotel, Motel, and **Electrical Power-Line** Resort Desk Clerks Installers and Repairers Location Quotient **Bartenders Electronics Engineers** Amusement and Recreation **Attendants** 1.0

The southern region features many different types of local economies within the larger area, ranging from the tourist areas of the Jersey Shore and Atlantic City to the more urban areas in the west near Philadelphia.

The occupations depicted by the blue bubbles are commonly found in the vibrant leisure and hospitality sector along the coastline. Atlantic City and its casino industry are an important contributor to the New Jersey economy.

There is a large electronics manufacturing presence in the Camden labor area, across the Delaware River from Philadelphia.



\$0



\$50,000



\$150,000

\$100,000

# These are some of the highest paying occupations in the southern region



### Average annual salary and employment of select high paying occupations, Southern New Jersey 2015

Occupation	Annual Salary	Employment
Pharmacists	\$121,800	1,860
Electronics Engineers	\$104,720	1,230
Clinical, Counseling, and School Psychologists	\$91,230	780
Electrical Power-Line Installers and Repairers	\$89,270	590
Gaming Managers	\$82,830	150
Registered Nurses	\$76,380	17,590
Supervisors of Construction Workers	\$71,460	1,950
Educational, Guidance, School, and Vocational Counselors	\$71,340	1,410
Correctional Officers and Jailers	\$70,090	3,770
Cost Estimators	\$70,070	1,210

Pharmacists and electronics engineers are two occupations with a significant level of employment in the lower seven counties that earned an average salary greater than \$100,000.

These occupations represent a very diverse mixture of industries in the south including casino gaming and construction.

There are more than 17,000 registered nurses employed in the southern region who earned an average salary of \$76,380 in 2015.





# These are a few occupations that earned a higher average salary in the southern region than in the other two regions



### Average annual salary, regional salary premium, and employment of select occupations, Southern New Jersey 2015

Occupation	Annual	Salary	Employment	Education
	Salary	Difference	Linployment	Education
Glaziers	\$73,020	+ \$14,700	360	High school diploma or equivalent
Cardiovascular Technologists and Technicians	\$75,930	+ \$7,170	150	Associate's degree
Automotive Body Repairers	\$52,380	+ \$6,180	630	High school diploma or equivalent
Medical and Clinical Laboratory Technicians	\$53,850	+ \$5,560	370	Associate's degree
Electrical Power-Line Repairers	\$89,270	+ \$4,550	590	High school diploma or equivalent
Postsecondary Vocational Education Teachers	\$61,300	+ \$4,440	560	Bachelor's degree
Environmental Engineers	\$94,220	+ \$3,490	220	Bachelor's degree
Roofers	\$61,060	+ \$2,820	420	No formal educational credential
Pharmacists	\$121,800	+ \$2,220	1,860	Doctoral or professional degree
Production, Planning, and Expediting Clerks	\$50,170	+ \$2,170	1,130	High school diploma or equivalent

While the minimum educational requirement of these occupations varies greatly, it is notable that half require no more than a high school education and may instead utilize career and technical education (CTE) or on-the-job training.

Each of these occupations earned an average salary greater than the overall average for the southern region.

Some of the industries represented by these occupations include automotive repair, health care, and construction.





#### Construction





Leisure, Hospitality & Retail

#### Healthcare





Advanced Manufacturing

### Transportation, Logistics & Distribution





Biopharmaceuticals & Life Sciences

#### **Financial Services**





Science, Technology, Engineering & Math



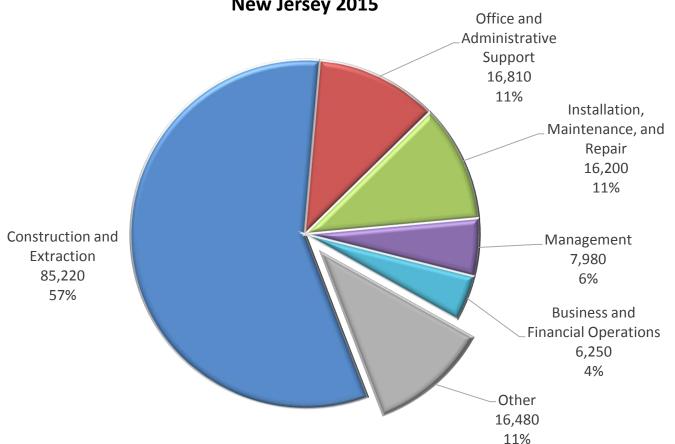


# INDUSTRY FOCUS

# More than half of the 149,000 people employed in the construction industry are classified among construction and extraction occupations

#### Construction

Profile of Construction Sector by Major Occupational Group
New Jersey 2015



More than 30,000 people in this industry are involved in administrative support, management and business and financial operations.

Another 16,000 work in occupations that are classified as installation, maintenance and repair occupations. This group includes the many different types of mechanics in the industry.

The majority of the "other" employment are classified as sales and transportation and material moving occupations.





# The top ten tradespeople in the construction industry typically earn an average annual salary near or above the statewide average

#### Construction

### Employment and Average Salary of the Top Ten Occupations Found in the Construction Sector, New Jersey 2015

Occupation	Employment	Average Salary
Construction Laborers	17,300	\$50,740
Carpenters	14,530	\$59,450
Electricians	11,100	\$70,250
Supervisors of Construction Workers	6,470	\$77,800
Plumbers, Pipefitters, and Steamfitters	5,850	\$68,530
Painters, Construction and Maintenance	3,430	\$39,010
Construction Equipment Operators	3,050	\$73,310
Sheet Metal Workers	2,290	\$70,220
Cement Masons and Concrete Finishers	2,210	\$57,010
Roofers	1,910	\$56,010

These ten occupations combined account for roughly 46 percent of the entire construction workforce, and nearly 80 percent of all those occupations classified in the construction and extraction group.

Many of the skilled occupations, like carpenters and electricians, may require at least some vocational education coupled with a registered apprenticeship.

All of these occupations incorporate a working knowledge of basic math and measurement, among other requisite skills.

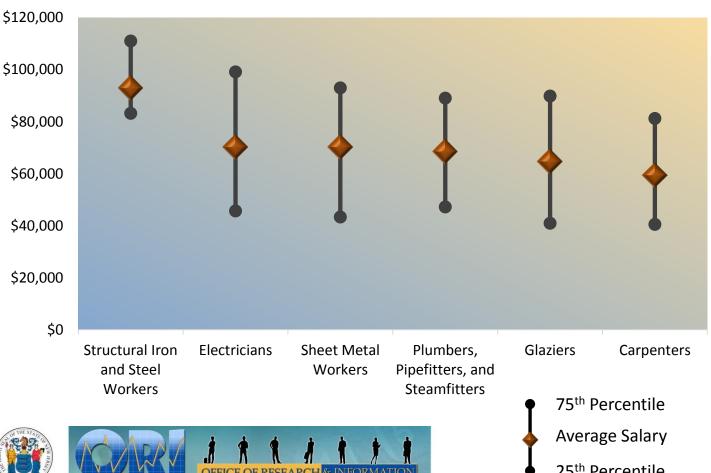




### The salary ranges of the middle 50 percent of these tradespeople often have very wide ranges based on level of experience

### 25<sup>th</sup>-75<sup>th</sup> Percentile and Average Annual Salaries of Common Trade Occupations in the Construction Sector

**New Jersey 2015** 



#### Construction

The lower bound denotes the 25<sup>th</sup> percentile annual salary, which is often used to estimate the salary level of an entry level worker.

The upper bound denotes the 75<sup>th</sup> percentile annual salary, which is often used to estimate the salary level of an experienced worker.

While many of these occupations may start at a salary level below the statewide average, there is a great opportunity for growth as a worker gains more experience.

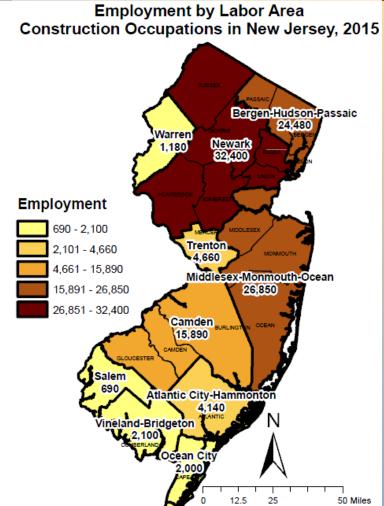




# The construction sector tends to be more mobile, but the highest concentrations of employment tend to be found in the most populous labor areas

#### Construction

Labor Area	Employment
Newark	32,400
Middlesex-Monmouth-Ocean	26,850
Bergen-Hudson-Passaic	24,480
Camden	15,890
Trenton	4,660
Atlantic City-Hammonton	4,140
Vineland-Bridgeton	2,100
Ocean City	2,000
Warren	1,180
Salem	690



In total, there are roughly 116,000 people employed in occupations classified as construction across all industries. These occupations include many types of skilled tradesmen such as carpenters and electricians, their helpers, highway maintenance workers, and all construction supervisors.

More than half of all of these workers are employed in the Middlesex-Monmouth-Ocean and Newark labor areas.

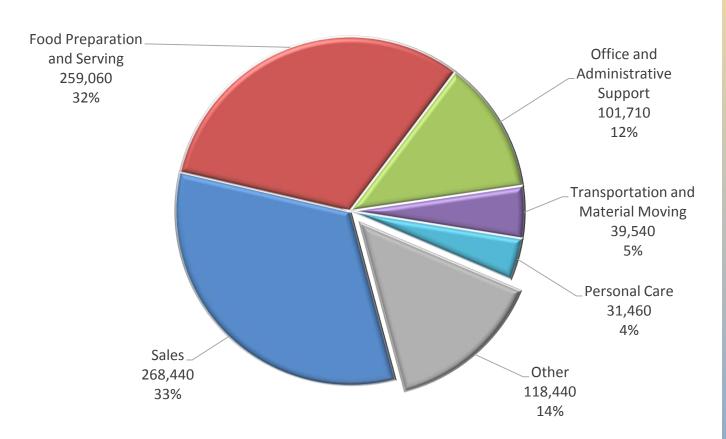
The Warren and Salem labor areas, which are primarily rural, have the lowest numbers of construction workers.





# The leisure, hospitality and retail (LHR) sector is the largest industry in New Jersey in terms of employment

### Profile of LHR Sector by Major Occupational Group New Jersey 2015



# Leisure, Hospitality & Retail

Nearly two-thirds of all employment in the LHR sector are classified as either sales or food preparation and serving occupations.

Office and administrative support, transportation and material moving, and personal care services (where many of the gaming occupations unique to the casino industry are classified) collectively account for nearly 173,000 jobs.

Less than one percent of all employment in the LHR sector is classified as a STEM occupation.





## These top ten occupations account for more than 60 percent of all employment in the LHR sector

### Employment and Average Salary of the Top Ten Occupations Found in the Leisure, Hospitality and Retail Sector, New Jersey 2015

Occupation	Employment	Average Salary	Minimum Education
Retail Salespersons	131,830	\$26,770	No formal educational credential
Cashiers	91,980	\$21,590	No formal educational credential
Waiters and Waitresses	58,870	\$23,130	No formal educational credential
Stock Clerks and Order Fillers	50,200	\$26,530	No formal educational credential
Combined Food Preparation and Serving Workers	47,140	\$21,670	No formal educational credential
Supervisors of Retail Sales Workers	28,220	\$48,130	High school diploma or equivalent
Food Preparation Workers	27,840	\$22,520	No formal educational credential
Counter Attendants, Cafeteria, Food Concession, and Coffee Shop	22,910	\$19,800	No formal educational credential
Cooks, Restaurant	18,370	\$30,060	No formal educational credential
Supervisors of Food Preparation and Serving Workers	17,780	\$40,070	High school diploma or equivalent

# Leisure, Hospitality & Retail

Retail salespersons and cashiers are the two largest occupations in terms of employment in the entire state. More than 90 percent of workers combined are employed by companies classified in the LHR sector.

The average salary for all occupations in this sector is \$30,800. Most of these top ten occupations in terms of employment fall below that threshold.

Many of the occupations in LHR can be obtained with minimal levels of education. These jobs may often be part-time, and paid on an hourly basis.

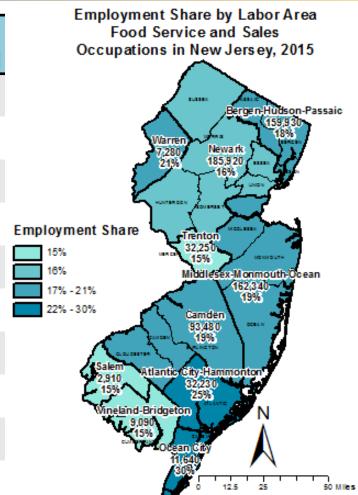




# The employment share of food service and sales occupations is far greater in the counties along New Jersey's coastline

# Leisure, Hospitality & Retail

Labor Area	Employment	% of Total
Ocean City	11,640	30%
Atlantic City-Hammonton	32,230	25%
Warren	7,280	21%
Middlesex-Monmouth-Ocean	162,340	19%
Camden	93,480	19%
Bergen-Hudson-Passaic	159,930	18%
Newark	185,920	16%
Vineland-Bridgeton	9,090	15%
Salem	2,910	15%
Trenton	32,250	15%



In the Ocean City and Atlantic City-Hammonton labor area, more than one-quarter of all employment is classified in these two occupational groups most closely linked to the leisure, hospitality and retail sector.

The statewide average for this measure is 18%. The Trenton, Salem, and Vineland-Bridgeton labor areas fall farthest below this average.

Despite this, greater than 70 percent of these occupations are found in the three largest labor areas; Newark, Middlesex-Monmouth-Ocean, and Bergen-Hudson-Passaic.

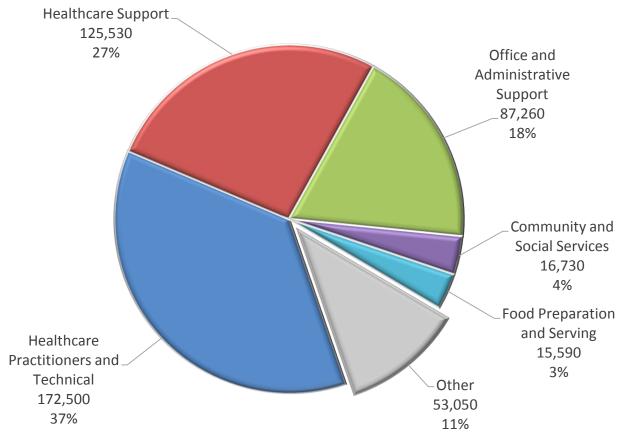




# Nearly two-thirds of all employment in the healthcare sector are directly involved with patient care

#### **Healthcare**

### Profile of Healthcare Sector by Major Occupational Group New Jersey 2015



Healthcare practitioners and technical workers primarily include doctors, nurses and specialized technicians. Most require a minimum of an associate's degree. Healthcare support workers include the assistants and aides, and typically require significantly less education.

Administrative support occupations are the third largest group and most often handle the behind the scenes clerical support that is essential for proper upkeep of medical records, billing, and accounting.





# More than half of all healthcare employment is found in these top ten occupations

#### Healthcare

### Most Commonly Found Occupations Found in the Healthcare Industry New Jersey, 2015

Occupation	Employment	Average Salary	Education
Registered Nurses	67,940	\$79,840	Bachelor's degree
Nursing Assistants	46,680	\$28,310	Postsecondary non-degree award
Receptionists and Information Clerks	32,120	\$30,350	High school diploma or equivalent
Home Health Aides	31,620	\$23,000	No formal educational credential
Medical Assistants	15,390	\$34,330	Postsecondary non-degree award
Physicians and Surgeons	14,020	\$197,750	Doctoral or professional degree
Licensed Practical and Licensed Vocational Nurses	12,850	\$53,300	Postsecondary non-degree award
Medical Secretaries	12,200	\$40,930	High school diploma or equivalent
Dental Assistants	9,490	\$40,000	Postsecondary non-degree award
Medical and Health Services Managers	8,410	\$117,780	Bachelor's degree

There is a wide range of job responsibilities found among this list of most commonly found occupations, ranging from patient care to administrative support. The required level of education for entry also ranges widely from no formal educational credential up through a Doctoral degree.

Three of these occupations earn an average annual salary greater than the statewide average of \$54,950.

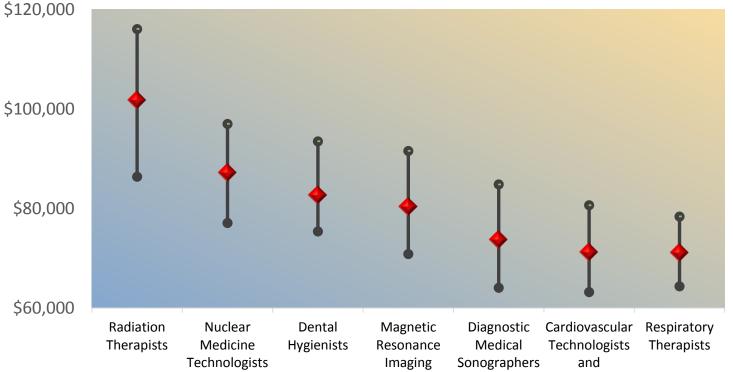




# There are many occupations in the health care industry that earn an above average wage, but require no more than an associate's degree

#### **Healthcare**

25<sup>th</sup>-75<sup>th</sup> Percentile and Mean Salary for Occupations that Commonly Require an Associate's Degree or Less New Jersey, 2015



**Technologists** 

Using the 25<sup>th</sup> percentile estimate as a measure for entry level salary and the 75<sup>th</sup> percentile as an approximation for experienced level salary, data shows that these occupations that only require an Associate's degree for entry can offer a relatively high level of earnings for minimal education.

The average salary of each of these occupations exceeds the statewide average of \$54,950.







**Technicians** 

## There are employment opportunities for registered nurses in a broad array of industry settings

#### **Healthcare**

### Employment and Average Salary for Registered Nurses by Industry New Jersey, 2015

Industry	Employment	Average Salary
Total, All industries	78,460	\$79,840
General Medical and Surgical Hospitals	41,100	\$85,110
Nursing Care Facilities	6,250	\$70,060
Home Health Care Services	6,200	\$71,450
Outpatient Care Centers	4,780	\$79,640
Offices of Physicians	4,160	\$68,880
Elementary and Secondary Schools	3,780	\$70,230
Specialty Hospitals	1,830	\$80,500
Employment Services	1,600	\$77,150
Psychiatric and Substance Abuse Hospitals	1,310	\$75,640
Community Care Facilities for the Elderly	1,150	\$72,260

General medical and surgical hospitals are the most common setting for registered nurses, accounting for more than half of all employment among industries. The average salary here is also the highest, averaging nearly \$7,000 more per year than the other nine industries on this list combined.

There are nearly 3,780 registered nurses working in elementary and secondary schools in New Jersey. They earn an average salary approaching \$69,000.

More than 90 percent of New Jersey's registered nurses are found among these ten industries.

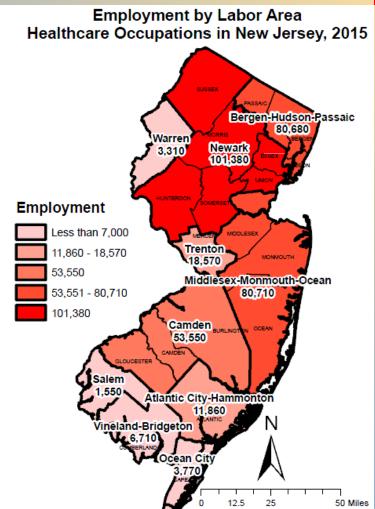




## The geographic distribution of healthcare employment is largely based on population and need

#### **Healthcare**

Labor Area	Employment
Newark	101,380
Middlesex-Monmouth-Ocean	80,710
Bergen-Hudson-Passaic	80,680
Camden	53,550
Trenton	18,570
Atlantic City-Hammonton	11,860
Vineland-Bridgeton	6,710
Ocean City	3,770
Warren	3,310
Salem	1,550



Nearly half of all healthcare practitioners and technical workers and healthcare support occupations are found in the Newark or Middlesex-Monmouth-Ocean labor areas.

There is a high concentration of healthcare employment found in the Camden Labor Area in Southern New Jersey, largely attributable to the Cooper University Healthcare system and Virtua Health system, which are clustered around Camden County.

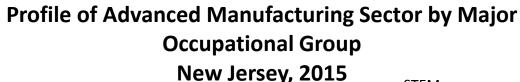
The Trenton-Ewing Labor Area, in Central New Jersey, is home to several large hospitals and many ambulatory care facilities that support them. 39

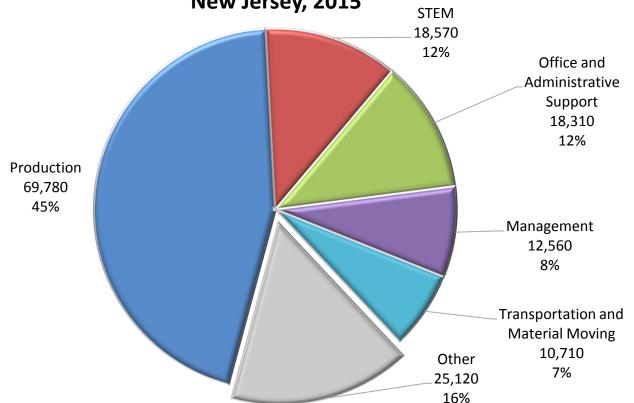




## Nearly half of all workers in the advanced manufacturing industry are classified as production workers

### Advanced Manufacturing





Some of the types of occupations categorized as production workers include highly skilled workers such as machinists, welders, and computer-numerically controlled (CNC) programmers as well as less skilled positions like assemblers and machine operators.

Roughly 12 percent of employment in this sector is classified as STEM occupations, responsible for much of the research and development to create and improve products.

Management and office and administrative support occupations account for roughly 20 percent of employment.

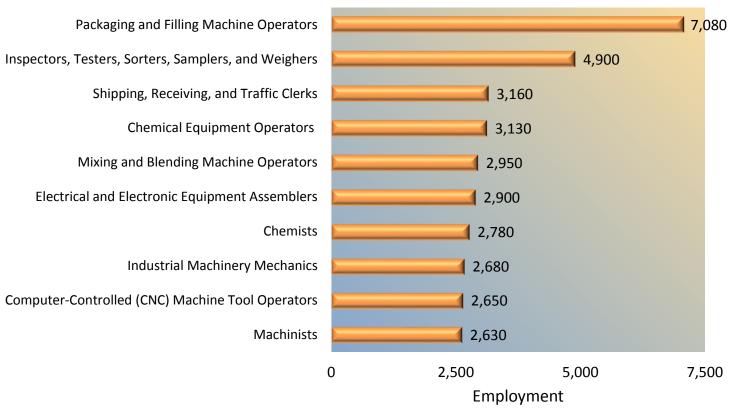




# The five primary components of advanced manufacturing include food, chemical, fabricated metal, machinery, and electronic product manufacturing

### Advanced Manufacturing

## Top Ten Occupations Found in the Advanced Manufacturing Sector New Jersey, 2015



These ten most commonly found occupations comprise about 23 percent of all advanced manufacturing employment.

While most of these occupations require no more than a high school diploma, they each require a certain level of training for proper operation. Entry level pay may be relatively low, but advancement through appropriate credentialing is common.

Machinists and computercontrolled machine tool operators, in particular, require a great level of skill, and continuous learning is essential for success.





## STEM occupations are essential to industries that are heavily involved in research and development

### Advanced Manufacturing

#### Top Detailed Industries in the Advanced Manufacturing Sector Employing STEM Occupations New Jersey, 2015

Industry	Employment	<b>Average Salary</b>
Pharmaceutical and Medicine	4,190	\$73,880
Navigational, Measuring, Electromedical, and Control Instruments	2,820	\$82,900
Basic Chemical	1,390	\$78,640
Medical Equipment and Supplies	1,310	\$88,700
Semiconductor and Other Electronic Component	1,250	\$74,210
Soap, Cleaning Compound, and Toiletry Preparation	790	\$75,010
Communications Equipment	690	\$93,840
Industrial Machinery	330	\$77,180
Petroleum and Coal Products	320	\$103,600
Electrical Equipment	300	\$74,920

A large portion of the STEM workers employed by companies in the pharmaceutical and medicine manufacturing industry (NAICS 3254) are chemists or other types of scientists.

Many of the STEM occupations found in the navigational, measuring, electromedical and control instruments industry (NAICS 3345) are classified as engineering and computer occupations.

Workers in STEM occupations in industries represented on this list all earn an average salary significantly higher than the statewide average of \$54,950.

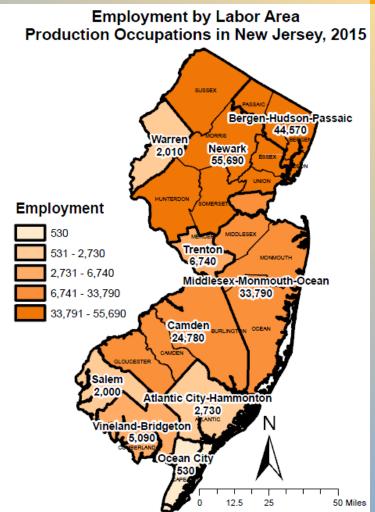




## Production occupations, which can vary greatly depending on what is being produced, are found in every labor area in New Jersey

### Advanced Manufacturing

Labor Area	Employment
Newark	55,690
Bergen-Hudson-Passaic	44,570
Middlesex-Monmouth-Ocean	33,790
Camden	24,780
Trenton	6,740
Vineland-Bridgeton	5,090
Atlantic City-Hammonton	2,730
Warren	2,010
Salem	2,000
Ocean City	530



Nearly three-quarters of all production workers in New Jersey are employed in just three labor areas; Newark, Bergen-Hudson-Passaic, and Middlesex-Monmouth-Ocean. Combined, these labor areas encompass twelve of New Jersey's twenty-one counties.

The Camden labor area, located across the Delaware River from Philadelphia, also employs a large number of production workers.

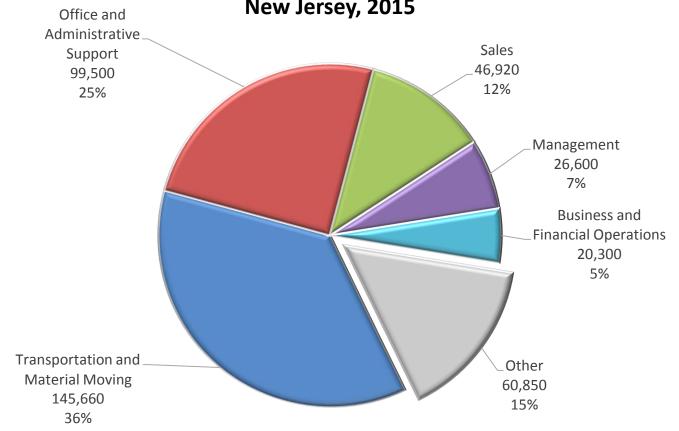
The remaining six labor areas account for only 10 percent of the state's production workers.





## Transportation, Logistics and Distribution (TLD) includes employers that are classified as wholesale trade, transportation, or warehousing.

### Profile of TLD Sector by Major Occupational Group New Jersey, 2015



## Transportation, Logistics & Distribution

The TLD sector is one of the largest industry sectors in New Jersey, and with employment of nearly 400,000 accounts for more than ten percent of all jobs in the state.

Transportation and material moving occupations account for more than one-third of all TLD employment.

Nearly 50 percent of all sector employment is classified in the next four largest groups, which handle the management, sales, administrative and other business related functions.





## Many of the top occupations in TLD have relatively low educational requirements

## Transportation, Logistics & Distribution

### Most Commonly Found Occupations in the TLD Sector New Jersey, 2015

These ten occupations combined account for more than 43 percent of all employment in the TLD sector.

Occupation	Employment	Average Salary	Education
Laborers and Freight and Stock	43,940	\$27,870	No formal educational credential
Wholesale Sales Representatives, non- Technical Products	30,620	\$76,420	High school diploma or equivalent
Truck Drivers, Heavy and Tractor-Trailer	27,710	\$47,460	Postsecondary nondegree award
Customer Service Representatives	13,180	\$39,120	High school diploma or equivalent
Truck Drivers, Light or Delivery Services	11,700	\$36,050	High school diploma or equivalent
School Bus Drivers	11,690	\$34,060	High school diploma or equivalent
General Office Clerks	9,680	\$34,100	High school diploma or equivalent
Industrial Truck and Tractor Operators	8,830	\$35,520	No formal educational credential
Stock Clerks and Order Fillers	8,560	\$26,530	No formal educational credential
Shipping, Receiving, and Traffic Clerks	8,520	\$35,410	High school diploma or equivalent

Wholesale sales representatives of non-technical products are the only occupation among the top ten in employment in TLD that earn an average salary (\$76,420) higher than the statewide average of \$54,950.

Most of the drivers and operators within TLD require some form of a commercial driver's license (CDL) or some other credential in order to be qualified to work.





## Each of these occupations has a significant presence in TLD and earns a salary far more than the statewide average

## Transportation, Logistics & Distribution

#### Selected Highly Paid Occupations in the TLD Industry Sector New Jersey 2015

Occupation	Employment	Average Salary	Education
Transportation, Storage, and Distribution Managers	2,710	\$123,710	High school diploma or equivalent
Wholesale Sales Representatives, Technical Products	4,900	\$112,190	Bachelor's degree
Commercial Pilots	470	\$99,850	High school diploma or equivalent
Applications Developers	2,050	\$99,320	Bachelor's degree
Network and Computer Systems Administrators	850	\$93,780	Bachelor's degree
Logisticians	1,840	\$80,440	Bachelor's degree
Market Research Analysts and Marketing Specialists	2,100	\$75,010	Bachelor's degree
Aircraft Mechanics and Service Technicians	1,180	\$74,380	Postsecondary nondegree award
Transportation Inspectors	280	\$72,900	High school diploma or equivalent
Wholesale and Retail Buyers	1,110	\$72,330	Bachelor's degree

Generally, the occupations within the TLD sector that earn the highest average salaries require at least a Bachelor's degree.

Many of these higher paying occupations are classified with either computer or business and financial occupational groups.

Commercial pilots, aircraft mechanics, and transportation inspectors have lower levels of educational requirement, yet still offer opportunities for higher earnings in the TLD sector.

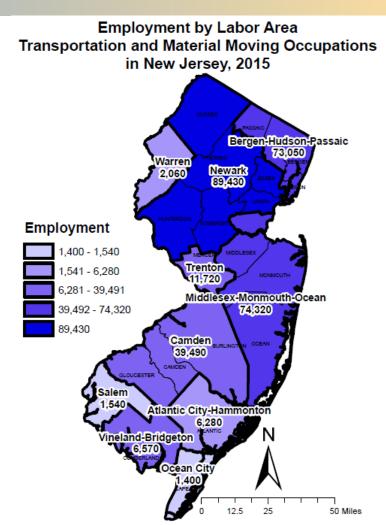




## New Jersey has a distinct geography and transportation infrastructure which links several major U.S. cities locally and access to the world through its international airports and seaports

## Transportation, Logistics & Distribution

Labor Area	Employment
Newark	89,430
Middlesex-Monmouth-Ocean	74,320
Bergen-Hudson-Passaic	73,050
Camden	39,490
Trenton	11,720
Vineland-Bridgeton	6,570
Atlantic City-Hammonton	6,280
Warren	2,060
Salem	1,540
Ocean City	1,400



The Newark Labor Area is home to nearly 30 percent of all TLD employment in the state. Beyond general warehousing and other forms of TLD, this area boasts the largest international airport in the state, Newark Liberty International, as well as several seaports. This network of land, air, and sea makes New Jersey a unique place in the movement of goods both locally and globally.

The Camden Labor Area in the south is host to many of New Jersey's trucking and warehousing companies. It is also home to the Port of Camden and the Gloucester Marine Terminal.

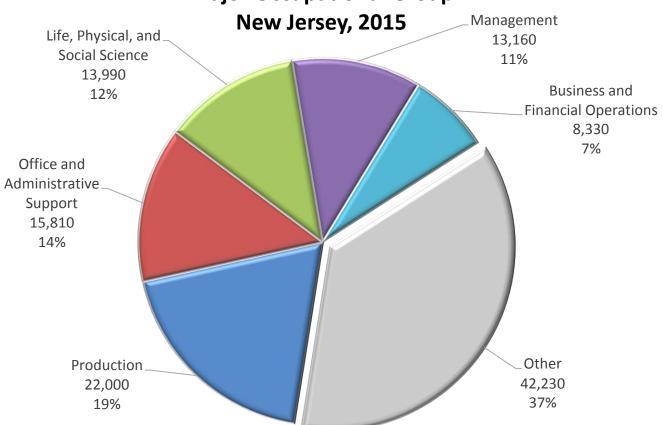




## There are roughly 115,520 employed in the biopharmaceutical and life sciences sector in New Jersey

#### Biopharmaceuticals & Life Sciences

### Profile of Biopharmaceuticals and Life Sciences Sector by Major Occupational Group



Nearly one-fifth of all workers in this industry are classified within the production occupational group.

The third largest occupational group (life, physical, and social science) includes many of the higher earning scientists, chemists, and technicians responsible for much of the research and development performed in this sector.

The "other" occupations are largely comprised of STEM and sales occupations who aid in the development and sales of the products created in this sector.

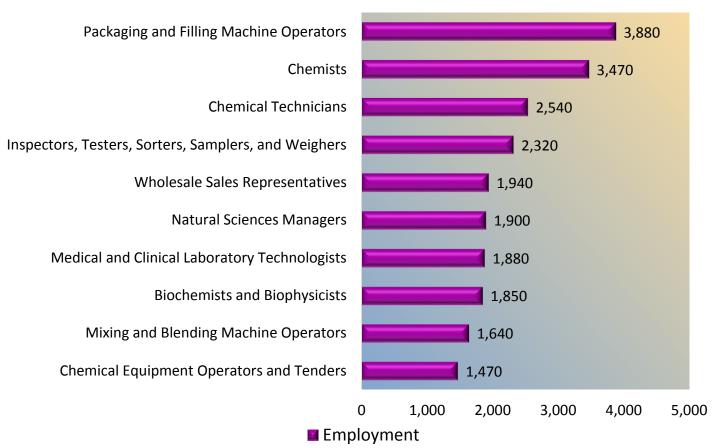




# Unlike most other sectors in this report, these top ten occupations account for less than 20 percent of all employment in this sector

#### Biopharmaceuticals & Life Sciences

### Top Ten Occupations Found in the Biopharmaceutical and Life Sciences Sector in New Jersey, 2015



The occupations on this list have a wide range of educational requirements. There are some machine operators and other production workers that require only a high school diploma as well as chemists and biochemists and biophysicists that require more advanced degrees.

Natural sciences managers are the highest paying occupation on this list, earning an average of nearly \$186,000.

Packaging and filling machine operators, on the other hand, earned an average salary of only \$28,520.





# Most of the highest paid occupations in the biopharmaceutical and life sciences sector are classified as STEM occupations.

#### Biopharmaceuticals & Life Sciences

### Highest Paying Non-Management Occupations Found in the Biopharmaceutical and Life Sciences Sector in New Jersey, 2015

Occupation	Employment	Average Salary	Education
Petroleum Engineers	300	\$180,440	Bachelor's degree
Pharmacists	640	\$118,680	Doctoral or professional degree
Biomedical Engineers	280	\$114,550	Bachelor's degree
Systems Software Developers	550	\$114,220	Bachelor's degree
Biochemists and Biophysicists	1,850	\$113,340	Doctoral or professional degree
Wholesale Sales Representatives	820	\$112,190	Bachelor's degree
Medical Scientists	310	\$107,680	Doctoral or professional degree
Chemical Engineers	310	\$101,520	Bachelor's degree
Industrial Engineers	1,160	\$91,450	Bachelor's degree
Chemists	3,470	\$83,650	Bachelor's degree

Pharmacists and wholesale sales representatives are the only non-STEM occupations on this list. Each still requires significant schooling, and earned an average salary exceeding \$112,000.

Despite relatively low levels of employment opportunity, petroleum engineers earn more in New Jersey than in any other state. At \$180,440, they earn more than three times the statewide average.

Chemists in New Jersey are also very well compensated, earning more here than in all but six other states.





## New Jersey employs a large concentration of high level occupations vital to the biopharmaceutical industry

#### Biopharmaceuticals & Life Sciences

#### **Employment and Average Salary by State in 2015**

**Biochemists & Biophysicists** 

**Chemists** 

State	Employment	Average Salary
California	5,040	\$112,410
New Jersey	3,170	\$113,340
New York	1,980	\$81,400
Maryland	1,570	\$83,970
Pennsylvania	1,240	\$90,350
Georgia	1,140	\$57,550
Florida	1,120	\$89,620
Illinois	1,120	\$97,130
Missouri	1,080	\$81,980
Minnesota	1,080	\$73,860

State	Employment	Average Salary
California	12,050	\$84,600
Texas	6,230	\$71,670
Pennsylvania	5,510	\$72,280
New Jersey	5,290	\$83,650
New York	4,320	\$78,970
Ohio	4,130	\$71,760
North Carolina	3,500	\$73,040
Illinois	3,210	\$80,630
Massachusetts	3,160	\$79,300
Maryland	3,070	\$106,690

New Jersey is home to more than 10 percent of the nation's biochemists and biophysicists, second only among states to California. Those working in this occupation earn an average salary of \$113,340, second only to Connecticut.

New Jersey ranks fourth in the total number of chemists employed, behind only California, Texas, and Pennsylvania. Combined, these four states account for more than one-third of all chemists in the nation. New Jersey also pays its chemists 7.4 percent more than the nation average of \$77,860.

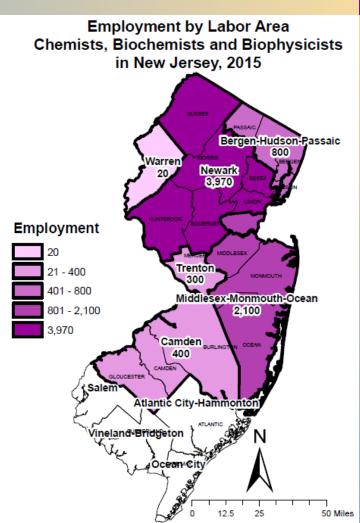




# Nearly two-thirds of the chemists, biochemists, and biophysicists in the state are employed by the biopharmaceutical and life sciences sector

#### Biopharmaceuticals & Life Sciences

Labor Area	Employment
Newark	3,970
Middlesex-Monmouth-Ocean	2,100
Bergen-Hudson-Passaic	800
Camden	400
Trenton	300
Warren	20
Atlantic City-Hammonton	N/A
Vineland-Bridgeton	N/A
Salem	N/A
Ocean City	N/A



Those employed in these occupations are generally concentrated in just two of New Jersey's labor areas. Combined, the Newark and Middlesex-Monmouth-Ocean labor areas account for over 70 percent of all employment.

There is a significant, although much smaller, employment presence in the Bergen-Hudson-Passaic, Camden, and Mercer labor areas.

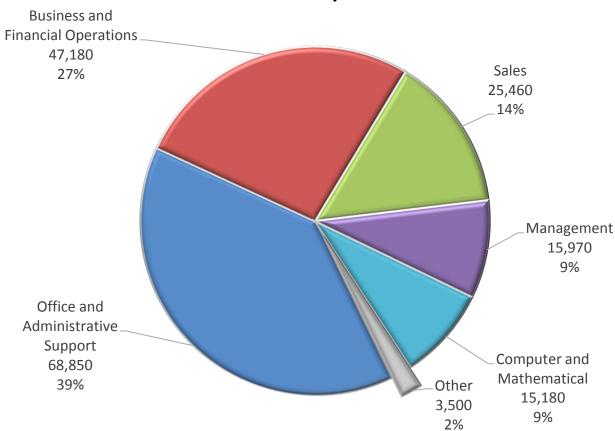
The four southernmost labor show no publishable data for these occupations, typically a result of very low to no employment.





### Nearly all employment in the financial services sector in New Jersey can be classified into just five groups

#### Profile of Financial Services Sector by Major Occupational Group New Jersey 2015







#### Financial Services

Office and administrative support occupations, including tellers and other types of financial clerks, is the largest occupational group accounting for more than 39 percent of financial employment.

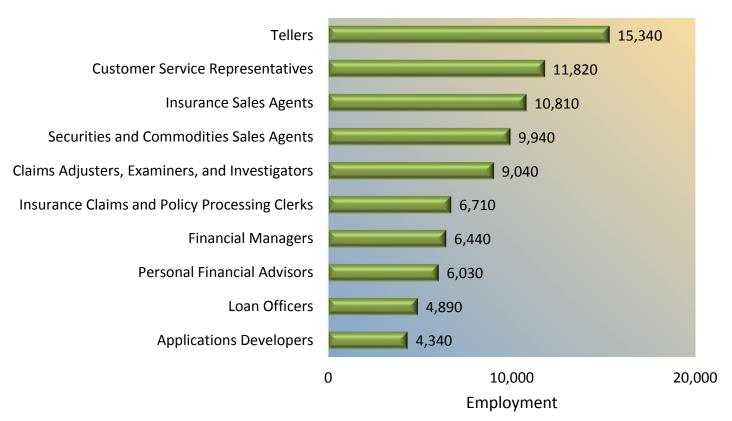
Sales occupations make up a relatively larger portion of all financial employment due to the securities and commodities exchanges that are mostly found in the northern counties nearest New York City.

The remaining three occupational groups that make up about 45 percent of employment in the financial sector typically require at least a bachelor's degree and tend to earn much higher average wages.

The three primary components of the financial industry, commercial banking, securities and commodities exchanges, and insurance carriers, are well represented on this list

#### Financial Services

### Top Ten Largest Occupations Found in the Financial Sector New Jersey, 2015



The largest two occupations in terms of employment, tellers and customer service representatives, are often the most common points of entry into the financial sector.

The remaining eight occupations cover a wide scope of job responsibilities, from management and administrative support to sales and software development.





## Each of these higher paying occupations requires at least a Bachelor's degree for entry

### Top Ten Non-Management Occupations Found in the Financial Sector New Jersey, 2015

Occupation	Employment	Average Salary	Education
Systems Software Developers	990	\$141,880	Bachelor's degree
Personal Financial Advisors	6,030	\$122,500	Bachelor's degree
Information Security Analysts	680	\$116,700	Bachelor's degree
Applications Developers	4,340	\$111,650	Bachelor's degree
Securities and Commodities Sales Agents	9,940	\$111,600	Bachelor's degree
Actuaries	520	\$107,060	Bachelor's degree
Computer Systems Analysts	3,100	\$102,280	Bachelor's degree
Financial Analysts	4,230	\$100,600	Bachelor's degree
Financial Examiners	1,000	\$96,690	Bachelor's degree
Insurance Underwriters	3,160	\$90,620	Bachelor's degree

#### Financial Services

Nearly 20 percent of all employment in the financial services sector is represented by the high paying jobs on this list.

Systems software developers, application developers, and information security analysts are booming occupations in the financial services sector as more of these functions are performed digitally or online. Each of these jobs earns an average salary exceeding \$100,000.

Traditional financial occupations like personal financial advisors and insurance underwriters are still prevalent within the sector.





## Among the Metropolitan Statistical Areas (MSAs) employing a large number of securities and commodities sales agents, two of the most prominent include counties in New Jersey

Top MSAs in the United States employing Securities and Commodities Sales Agents
New Jersey, 2015

Metropolitan Statistical Area	Employment	Location Quotient	Average Salary
New York-Newark-Jersey City, NY-NJ-PA	60,340	2.9	\$150,250
Los Angeles-Long Beach-Anaheim, CA	17,650	1.4	\$88,970
Chicago-Naperville-Elgin, IL-IN-WI	16,830	1.6	\$105,290
Dallas-Fort Worth-Arlington, TX	9,450	1.2	\$97,630
Boston-Cambridge-Nashua, MA-NH	9,020	1.5	\$132,010
San Francisco-Oakland-Hayward, CA	8,870	1.8	\$109,350
Houston-The Woodlands-Sugar Land, TX	8,630	1.3	\$94,290
Miami-Fort Lauderdale-West Palm Beach, FL	8,460	1.5	\$93,690
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	8,340	1.3	\$102,320
Denver-Aurora-Lakewood, CO	6,140	1.9	\$69,840

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#### Financial Services

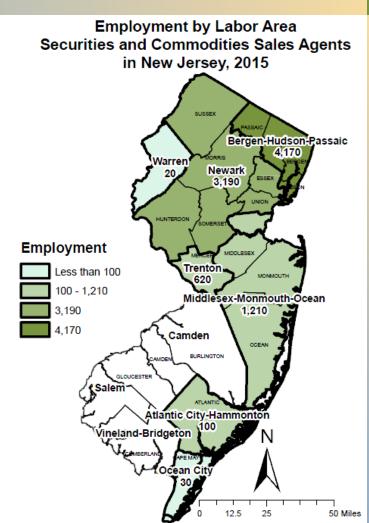
New York City is the financial capital of the world, hosting the largest stock exchange on the planet. Its close proximity to many of New Jersey's northern counties are a direct benefit to the state. Its MSA employs more than three times the number of securities and commodities sales agents of any other MSA in the country. The average salary for this occupation is also much higher than in any other MSA.

The MSA surrounding
Philadelphia also makes
the top ten list of areas
employing this
occupation. Combined,
nearly one-quarter of all
securities and
commodities sales agents
in the country are
employed in the two
MSAs surrounding New
York City and Philadelphia.

## Securities and commodities sales agents are typically employed in labor areas near either the New York or Philadelphia stock exchanges

#### Financial Services

Labor Area	Employment
Bergen-Hudson-Passaic	4,170
Newark	3,190
Middlesex-Monmouth-Ocean	1,210
Trenton	620
Atlantic City-Hammonton	100
Ocean City	30
Warren	20
Camden	N/A
Vineland-Bridgeton	N/A
Salem	N/A



Greater than 40 percent of all securities and commodities sales agents in New Jersey are employed in the Bergen-Hudson-Passaic labor area.

There are another nearly 4,500 security and commodities sales agents who are employed in the Newark and Middlesex-Monmouth-Ocean labor areas. These three areas combined account for 85 percent of all employment in the state.





# New Jersey ranks first among all states in STEM occupational\* employment per square mile, and its 223,800 workers ranks twelfth in total STEM employment

# Science, Technology, Engineering & Math

State	All STEM Employment	Rank
California	1,054,650	1
Texas	679,200	2
New York		3
	416,830	_
Florida	318,620	4
Virginia	300,090	5
Pennsylvania	292,560	6
Illinois	290,040	7
Ohio	264,760	8
Michigan	263,080	9
Massachusetts	259,780	10
Washington	254,920	11
New Jersey	223,800	12
Maryland	217,680	13
Georgia	212,230	14
North Carolina	209,270	15

State	STEM/Square Mile	Rank
New Jersey	25.7	1
Massachusetts	24.6	2
Maryland	17.5	3
Connecticut	16.7	4
Rhode Island	15.8	5
Delaware	10.3	6
New York	7.6	7
Virginia	7.0	8
California	6.4	9
Pennsylvania	6.4	10
Ohio	5.9	11
Illinois	5.0	12
Florida	4.8	13
North Carolina	3.9	14
New Hampshire	3.7	15

California, Texas and New York, the three most populous states in the United States, account for more than 28 percent of all STEM jobs in the nation.

New Jersey has the most density of STEM employment of all states, with nearly 26 STEM workers per square mile.

Four of the top fifteen states in total STEM employment are found in the Northeast Region of the U.S., however, only Vermont (#29) and Maine (#40) qualify as northeastern states that fall outside the top fifteen in STEM employment per square mile.



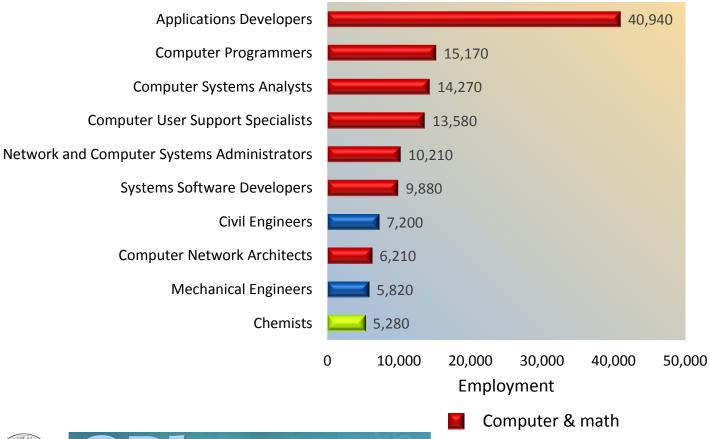


\*STEM occupations are found across all industries

## The ten occupations on this list account for more than 57 percent of all STEM employment in New Jersey

# Science, Technology, Engineering & Math

### Top Ten STEM Occupations Found in All Industries New Jersey, 2015



Computer and math occupations are the largest of the three groups that make up total STEM employment, accounting for roughly 61 percent of STEM jobs. Seven of the top ten occupations on this list are classified in this group.

Architecture and engineering occupations employed more than 51,400 in 2015. Civil and mechanical engineers are its two largest occupations.

Life, physical and social sciences occupations employ the fewest of the three groups. Chemists are the only occupation among the top ten STEM jobs.





# \$91,100, which is nearly 66 percent more than the statewide average

# Science, Technology, Engineering & Math

#### Highest Paying STEM Occupations New Jersey, 2015

Occupation	Employment	Average Salary	Minimum Education
Computer and Information Research Scientists	1,300	\$123,190	Doctoral or professional degree
Computer Network Architects	6,210	\$117,770	Bachelor's degree
Biomedical Engineers	570	\$114,550	Bachelor's degree
Actuaries	790	\$114,540	Bachelor's degree
Systems Software Developers	9,880	\$114,220	Bachelor's degree
Biochemists and Biophysicists	3,170	\$113,340	Doctoral or professional degree
Information Security Analysts	1,870	\$109,940	Bachelor's degree
Medical Scientists	3,840	\$107,680	Doctoral or professional degree
Electronics Engineers	4,210	\$106,260	Bachelor's degree
Computer Hardware Engineers	840	\$104,740	Bachelor's degree

Each of the top ten highest paying STEM occupations earns an average salary exceeding six figures, and requires a minimum education of at least a Bachelor's degree.

Computer and math occupations are again prominent on this list, accounting for five of the top ten spots.

The two occupations classified with life, physical, and social sciences, biochemists and biophysicists and medical scientists, each require a Doctoral degree.





### The industries listed below employ a large number or share of STEM workers

# Science, Technology, Engineering & Math

Industry	STEM Employment
Computer Systems Design and Related Services	44,860
Architectural, Engineering, and Related Services	21,160
Scientific Research and Development Services	16,150
Management of Companies and Enterprises	15,050
Wired Telecommunications Carriers	8,120
Management, Scientific, and Technical Consulting Services	7,410
Securities and Commodity Contracts Intermediation	5,310
Pharmaceutical and Medicine Manufacturing	4,190
Professional and Commercial Equipment Wholesalers	3,810
Colleges, Universities, and Professional Schools	3,810

Industry	Total Employment	STEM Employment	STEM Share
Computer Systems Design and Related Services	70,400	44,860	63.7%
Software Publishers	5,680	3,350	59.0%
Architectural and Engineering Services	36,880	21,160	57.4%
Scientific Research and Development Services	29,730	16,150	54.3%
Data Processing, Hosting, and Related Services	9,610	3,390	35.3%
Wired Telecommunications Carriers	26,010	8,120	31.2%
Basic Chemical Manufacturing	5,770	1,390	24.1%
Navigational, Measuring, and Control Instruments Manufacturing	12,160	2,820	23.2%
Securities and Commodity Contracts Intermediation	26,260	5,310	20.2%
Pharmaceutical and Medicine Manufacturing	22,520	4,190	18.6%

Many of the industries with the largest numbers or shares of STEM employment are classified in the manufacturing, information, or professional and business services sectors.

Computer systems design services ranks as the highest industry in New Jersey for STEM employment, accounting for more than one in every five STEM jobs. Nearly two-thirds of all employment in this industry is classified as a STEM occupation.

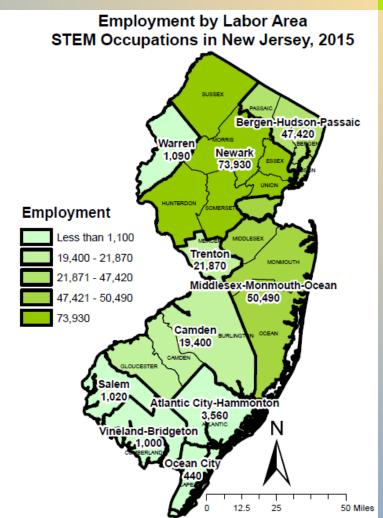




## There are STEM workers employed in all parts of the state, but with concentrations in a few labor areas

# Science, Technology, Engineering & Math

Labor Area	Employment
Newark	73,930
Middlesex-Monmouth-Ocean	50,490
Bergen-Hudson-Passaic	47,420
Trenton	21,870
Camden	19,400
Atlantic City-Hammonton	3,560
Warren	1,090
Salem	1,020
Vineland-Bridgeton	1,000
Ocean City	440



The Newark labor area employs nearly 74,000 STEM workers, by far the most in any other New Jersey labor area.

The Middlesex-Monmouth-Ocean labor area in the central part of the state employs more than 50,000 STEM workers.

The Bergen-Hudson-Passaic labor area in the north employs another 47,000 STEM workers. Combined, these three areas account for three of every four STEM jobs.

However, there are also substantial employment opportunities in the more remote parts of the state, like the Ocean City and Warren labor areas.





#### Acknowledgements

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## The goal of the OES survey is to collect occupational employment and wage information from employers of different geographies, industries and company sizes

#### **Appendix A**

With the cooperation of employers who are surveyed, wage and employment estimates are published for over <u>800 occupations</u>.

Data for New Jersey is <u>published</u> statewide and also by labor area, which are comprised of one or more counties. Estimates are also published by major industry group (2-digit NAICS), and may be available at even finer levels of NAICS detail.

All estimates are comparable to the nation, all 50 states, Puerto Rico, Guam, and the U.S. Virgin Islands. Estimates for areas outside of New Jersey can be accessed via state websites and also through the Bureau of Labor Statistics.

More information on the OES survey can be accessed in the <u>technical</u> <u>notes</u> section on the Web.





## There are eight industry clusters featured in this report that have been identified as having particular importance to New Jersey's workforce and economic success

**Appendix B** 

Some industry clusters are made up of only one NAICS industry:

- The <u>construction</u> sector is wholly comprised of the construction industry (NAICS 23).
- The <u>finance</u> sector is wholly comprised of the finance industry (NAICS 52).

Some clusters are made up of only a few NAICS industries:

- The <u>transportation</u>, <u>logistics</u>, <u>and distribution</u> (TLD) sector is comprised of wholesale trade (NAICS 42) and transportation and warehousing (NAICS 48-49).
- The <u>health care</u> sector is comprised of ambulatory care facilities (NAICS 621), hospitals (NAICS 622), and nursing and residential care facilities (NAICS 623).
- The <u>leisure</u>, <u>hospitality</u>, <u>and retail</u> sector is comprised of retail trade (NAICS 44-45), arts, entertainment and recreation (NAICS 71), and accommodation and food services (NAICS 72).

Some clusters are made up of several detailed NAICS industries:

 The <u>advanced manufacturing</u> and <u>biopharmaceutical and life sciences</u> cluster compositions are illustrated on the next page.

The <u>science</u>, <u>technology</u>, <u>engineering</u>, <u>and math (STEM)</u> cluster is categorized based on occupation rather than industry classification. This cluster includes three major occupational (SOC) groups that can be found across all industries; computer and math (SOC 15-0000), architecture and engineering (SOC 17-0000), and life, physical, and social science (SOC 19-0000) occupations.





## Industrial composition of advanced manufacturing and biopharmaceuticals and life sciences sectors

#### **Appendix B**

#### **Advanced Manufacturing** Industry NAICS 311 **Food Manufacturing** 325 **Chemical Manufacturing** 332 **Fabricated Metal Product Manufacturing** 333 **Machinery Manufacturing** Computer And Electronic Product 334 Manufacturing **Petroleum And Coal Products** 3241 Manufacturing 3272 Glass And Glass Product Manufacturing 3353 **Electrical Equipment Manufacturing** 3363 Motor Vehicle Parts Manufacturing **Aerospace Product And Parts** 3364 Manufacturing 3366 Ship And Boat Building **Medical Equipment And Supplies** 3391 Manufacturing

Biopharmaceuticals and Life Sciences			
NAICS	Industry		
3254	Pharmaceutical & Medicine Manufacturing		
3256	Soap, Cleaning Compounds, & Toilet Prep Manufacturing		
3345	Navigational, Measuring, Electromedical & Control Instrument Manufacturing		
3391	Medical Equipment & Supplies Manufacturing		
4242	Drugs & Druggists Sundries Wholesalers		
5417	Scientific Research & Development Services		
6215	Medical & Diagnostic Labs		





# New Jersey contains 21 counties that are combined to create 10 distinct labor areas, and is commonly referred to having 3 regions; northern, central and southern

#### **Appendix C**



Region	<b>Labor Areas</b>	Counties
Northern	Bergen-Hudson- Passaic	Bergen, Hudson, Passaic
	Newark	Essex, Union, Morris, Sussex, Hunterdon, Somerset
	Warren	Warren
Central	Middlesex- Monmouth- Ocean	Middlesex, Monmouth, Ocean
	Trenton	Mercer
	Camden	Burlington, Camden, Gloucester
Southern	Atlantic City- Hammonton	Atlantic
	Salem	Salem
	Vineland- Bridgeton	Cumberland
	Ocean City	Cape May

There are two metropolitan statistical areas (MSAs) that include parts of New Jersey.

The New York-Northern New Jersey-Long Island, NY-NJ-PA MSA includes the Bergen-Hudson-Passaic, Newark-Union, and Edison labor areas.

The Philadelphia-Camden-Wilmington, PA-NJ-DE-MD MSA includes the Camden, Trenton-Ewing, Vineland-Millville-Bridgeton, and Salem labor areas.





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