

# Technology Industry Cluster

Traditional Labor Market  
Information View

Winter 2014 – 2015



# Technology Industry Cluster:

## Employment Analysis

## Traditional Labor Market Information View

## Winter 2014 – 2015



# Employment Overview

- In 2013 New Jersey's technology cluster accounted for 354,640 jobs or 11.0 percent of private sector employment statewide. Nationally the cluster was responsible for 9.6 percent of all private sector employment.
- The annual average wage for the technology cluster was \$110,952 in 2013 or 188 percent of the statewide average (\$59,026) for all industries. Employers in the industry paid over \$39 billion in wages, or about 21 percent of the total wages paid in all industries.
- Employment within the technology cluster can primarily be found within the following sectors: professional, scientific and technical services (48.6%), manufacturing (19.6%), wholesale trade (15.8%), and information (13.9%)
- Employment in the cluster peaked in 2007 at 392,965 jobs.
- Note: The technology cluster was expanded to reflect the new U.S. Bureau of Labor Statistics definition of technology industries (2013). BLS designated NAICS industries as technology based on concentration levels of Science, Technology, Engineering & Math (STEM) occupations within the industries.



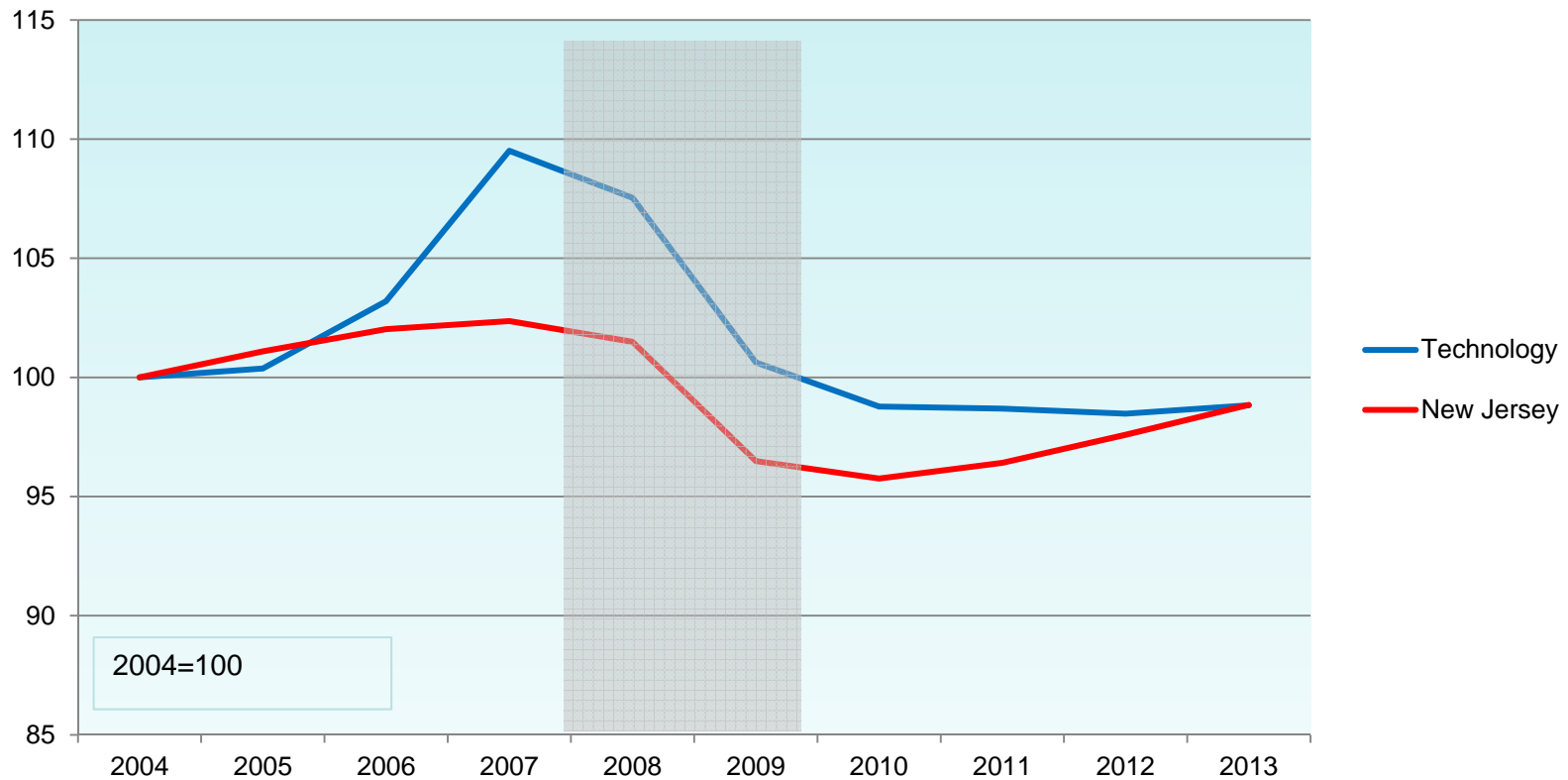
The technology cluster was expanded to reflect the new U.S. Bureau of Labor Statistics definition of technology industries (2013). BLS designated NAICS industries as technology based on concentration levels of Science, Technology, Engineering & Math (STEM) occupations within the industries

<b>NAICS Description</b>	
2111	Oil and Gas Extraction
2211	Electric Power Generation, Transmission and Distribution
3241	Petroleum and Coal Products Manufacturing
3251	Basic Chemical Manufacturing
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing
3254	Pharmaceutical and Medicine Manufacturing
3332	Industrial Machinery Manufacturing
3333	Commercial and Service Industry Machinery Manufacturing
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing
3341	Computer and Peripheral Equipment Manufacturing
3342	Communications Equipment Manufacturing
3343	Audio and Video Equipment Manufacturing
3344	Semiconductor and Other Electronic Component Manufacturing
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing
3346	Manufacturing and Reproducing Magnetic and Optical Media
3353	Electrical Equipment Manufacturing
3364	Aerospace Product and Parts Manufacturing
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers
4236	Household Appliances and Electrical and Electronic Goods Merchant Wholesalers
4242	Drugs and Druggists' Sundries Merchant Wholesalers
4861	Pipeline Transportation of Crude Oil
5112	Software Publishers
5171	Wired Telecommunications Carriers
5172	Wireless Telecommunications Carriers (except Satellite)
5174	Satellite Telecommunications
5179	Other Telecommunications
5182	Data Processing, Hosting, and Related Services
5191	Other Information Services
5211	Monetary Authorities-Central Bank
5413	Architectural, Engineering, and Related Services
5415	Computer Systems Design and Related Services
5416	Management, Scientific, and Technical Consulting Services
5417	Scientific Research and Development Services



Technology sector employment since 2010 has remained virtually flat while statewide employment has begun to increase (+3.2%). Technology employment is currently slightly below 2004 levels (-1.2%).

### Technology Sector vs. Statewide Employment 2004 - 2013



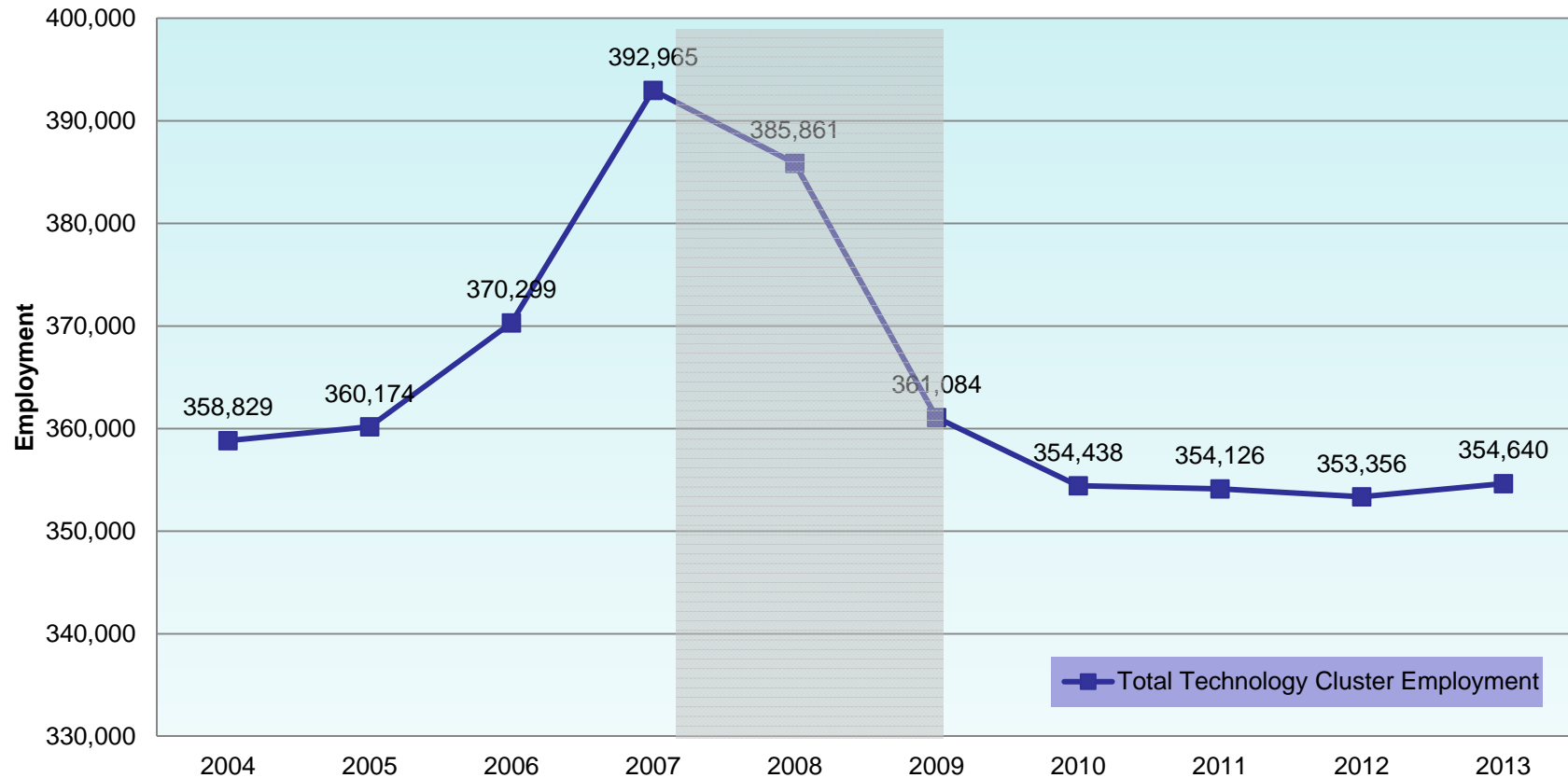
Source: NJLWD, Quarterly Census of Employment & Wages, Annual Averages

Gray area denotes U.S. economic recession as defined by the National Bureau of Economic Research (NBER)



Employment in the Cluster peaked in 2007 and has declined by 9.8 percent (-38,325 jobs) since.

### Technology Cluster Employment 2004 - 2013



Source: NJLWD, Quarterly Census of Employment & Wages, Annual Averages

Gray area denotes U.S. economic recession as defined by the National Bureau of Economic Research (NBER)

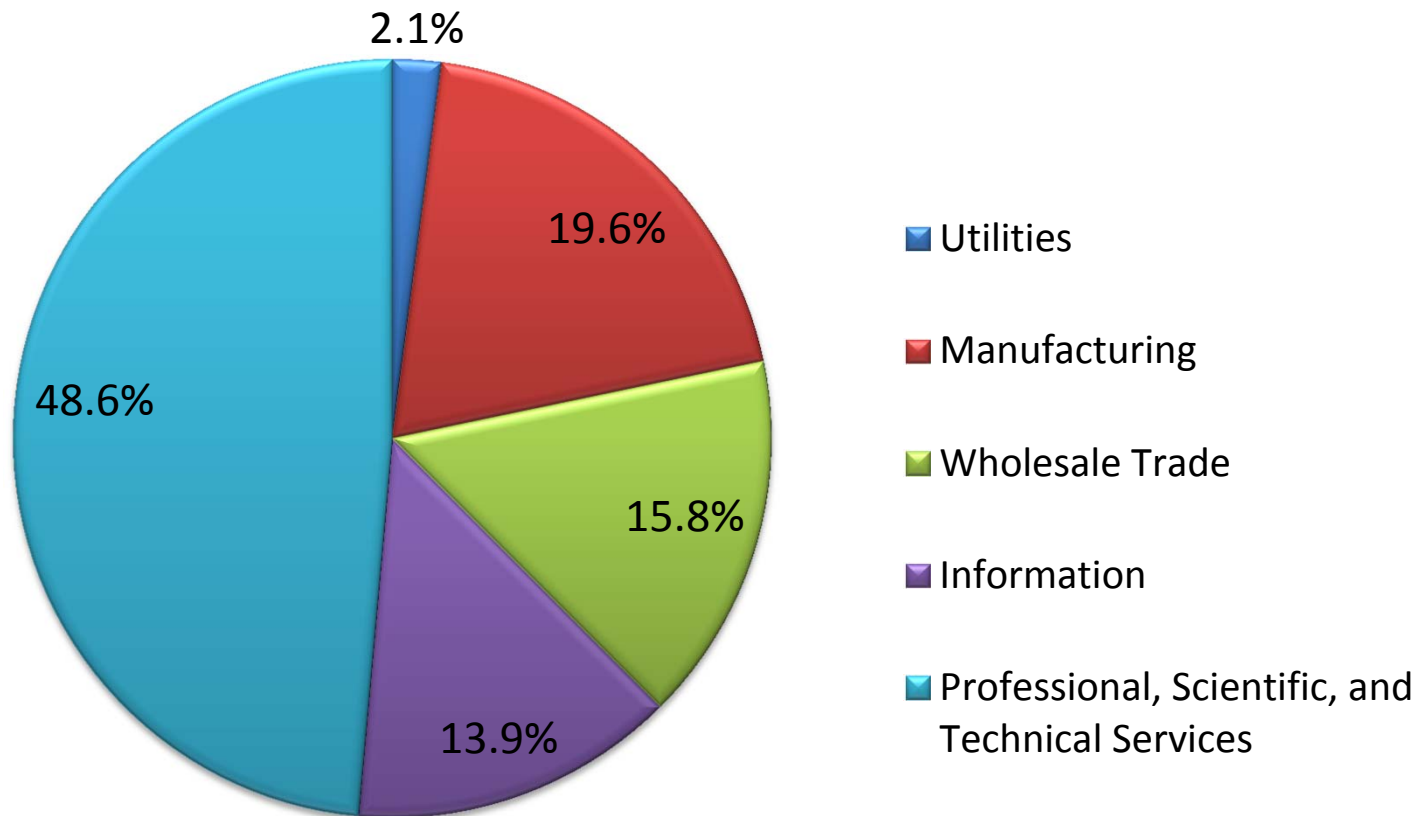


STATE OF NEW JERSEY

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Professional, Scientific, and Technical Services industries accounted for almost half of cluster employment in 2013.

**Percent Employment by Component Sector**



Source: Quarterly Census of Employment & Wages, 2013 Annual Averages

Over seventy-four percent of all business establishments in the technology cluster were in the professional, scientific and technical services sector in 2013.

## Technology Cluster: Component Sectors, 2013 Annual Averages

Description	Units	Employment Average	Wages	
			Average	Total
All Private Sector Industries	251,194	3,234,796	\$59,026	\$190,935,636,907
All Cluster Industries	26,499	354,640	\$110,952	\$39,348,135,926
Utilities	173	7,383	\$118,066	\$871,681,357
Manufacturing	1,473	69,642	\$115,735	\$8,060,032,976
Wholesale Trade	2,974	55,938	\$112,034	\$6,266,960,194
Information	2,172	49,355	\$109,557	\$5,407,187,454
Professional, Scientific, and Technical Services	19,699	172,210	\$108,753	\$18,728,429,490
Other	8	112	\$123,611	\$13,844,455

Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



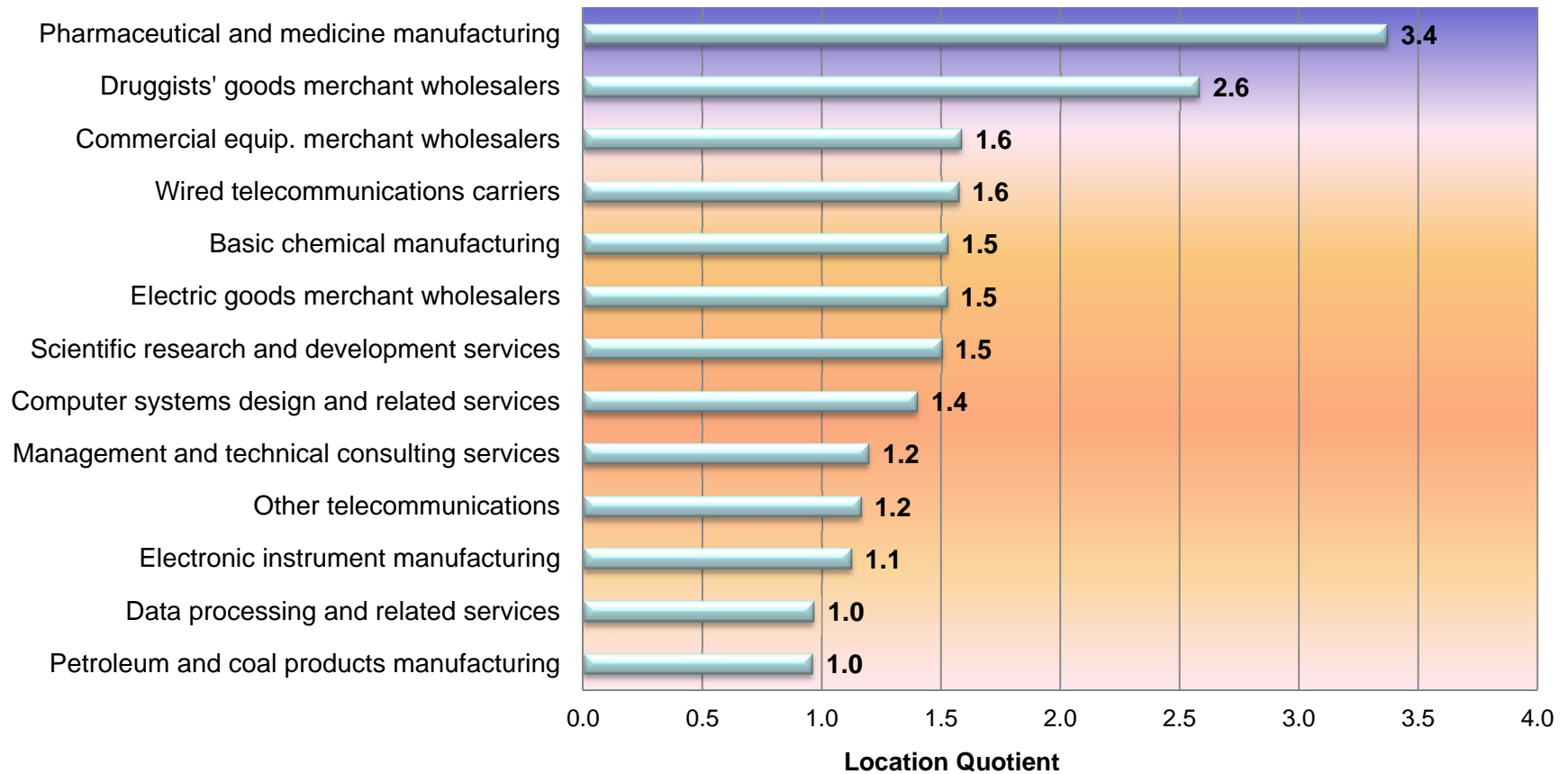
Within the technology cluster over 83 percent of employment was found in only ten industries in 2013.

<b>Technology Cluster: Component Industries, 2013 Annual Averages</b>					
<u>NAICS4</u>	<u>Industry</u>	<u>Establishments</u>	<u>Employment Average</u>	<u>Percent of Cluster Employment</u>	<u>Wages Average</u>
	<b>All Private Sector Industries, NJ</b>	<b>251,194</b>	<b>3,234,796</b>		<b>\$59,026</b>
	<b>All Cluster Industries</b>	<b>26,499</b>	<b>354,640</b>	<b>100.0%</b>	<b>\$110,952</b>
	<b>Largest Ranked by Employment</b>				
5415	Computer systems design and related services	8,734	68,100	19.2%	\$108,749
5416	Management and technical consulting services	6,900	40,580	11.4%	\$88,721
5413	Architectural and engineering services	3,378	36,387	10.3%	\$88,265
4234	Commercial equip. merchant wholesalers	1,512	28,153	7.9%	\$100,733
5417	Scientific research and development services	687	27,143	7.7%	\$166,183
5171	Wired telecommunications carriers	450	27,098	7.6%	\$114,052
3254	Pharmaceutical and medicine manufacturing	234	26,720	7.5%	\$159,263
4242	Druggists' goods merchant wholesalers	553	13,981	3.9%	\$156,459
4236	Electric goods merchant wholesalers	909	13,804	3.9%	\$90,090
3345	Electronic instrument manufacturing	310	12,606	3.6%	\$94,883
	<b>Smallest Ranked by Employment</b>				
5174	Satellite telecommunications	21	125	0.0%	\$80,411
3341	Computer and peripheral equipment mfg.	47	469	0.1%	\$104,035
3333	Commercial and service industry machinery	76	1,447	0.4%	\$66,594
3364	Aerospace product and parts manufacturing	24	1,499	0.4%	\$71,204
5172	Wireless telecommunications carriers	176	1,931	0.5%	\$84,561
3353	Electrical equipment manufacturing	75	2,061	0.6%	\$67,552
3342	Communications equipment manufacturing	105	2,535	0.7%	\$109,841
5179	Other telecommunications	329	2,792	0.8%	\$89,287
3332	Industrial machinery manufacturing	135	2,898	0.8%	\$71,199



# New Jersey's technology sector employment share in several key industries was greater than the nation in 2013

## Location Quotient's of Selected Technology Cluster Industries

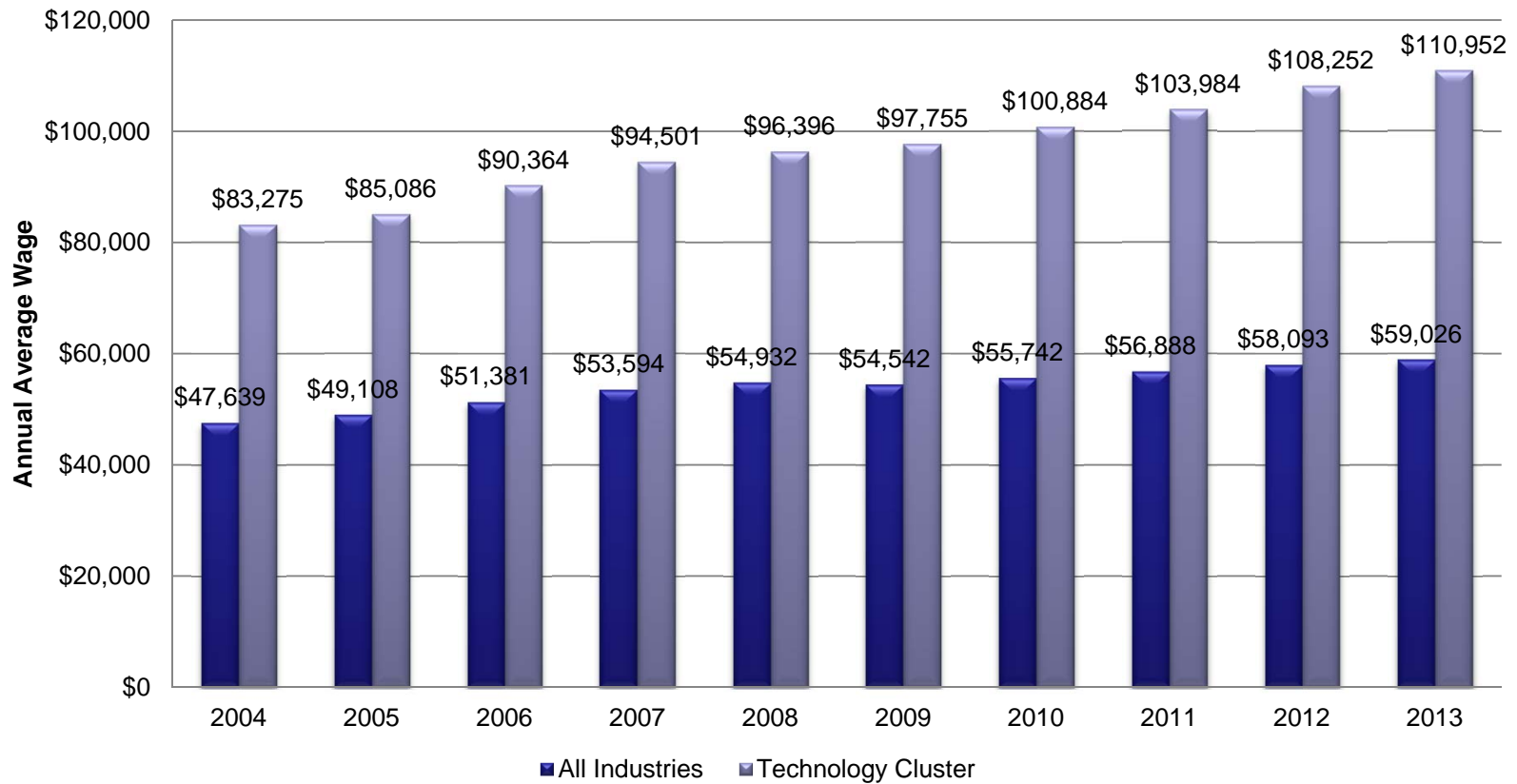


Source: Quarterly Census of Employment & Wages, 2013 Annual Average



# Wages in the Technology Cluster have averaged 179 percent of the statewide annual average wage since 2004

**2004 - 2013 Annual Average Wages:  
All Private Sector Industries vs. Technology Cluster**



Source: NJLWD, Quarterly Census of Employment & Wages, Annual Averages



Employment in computer systems design and related services accounted for 19.2 percent of total technology cluster employment and 33.0 percent of its establishments.

Technology Cluster: Professional, Scientific, and Technical Services Sector, 2013 Annual Averages					
NAICS4	Industry	Units	Employment	Wages	
			Average	Average	Total
	<b>All Cluster Industries</b>	<b>26,499</b>	<b>354,640</b>	<b>\$110,952</b>	<b>\$39,348,135,926</b>
	<b>Professional, Scientific, and Technical Services</b>	<b>19,699</b>	<b>172,210</b>	<b>\$108,753</b>	<b>\$18,728,429,490</b>
5413	Architectural and engineering services	3,378	36,387	\$88,265	\$3,211,676,832
5415	Computer systems design and related services	8,734	68,100	\$108,749	\$7,405,838,891
5416	Management and technical consulting services	6,900	40,580	\$88,721	\$3,600,278,780
5417	Scientific research and development services	687	27,143	\$166,183	\$4,510,634,987
Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages					



## Pharmaceutical and medicine manufacturing led the manufacturing component in share of employment (38.4%) and wages (52.8%) in 2013

Technology Cluster: Manufacturing Sector, 2013 Annual Averages					
NAICS4	Industry	Units	Employment	Wages	
			Average	Average	Total
	<b>All Cluster Industries</b>	<b>26,499</b>	<b>354,640</b>	<b>\$110,952</b>	<b>\$39,348,135,926</b>
	<b>Manufacturing</b>	<b>1,473</b>	<b>69,642</b>	<b>\$115,735</b>	<b>\$8,060,032,976</b>
3241	Petroleum and coal products manufacturing	67	3,070	\$112,533	\$345,514,568
3251	Basic chemical manufacturing	112	6,229	\$108,417	\$675,282,889
3252	Resin, rubber, and artificial fibers mfg.	ND	ND	ND	ND
3254	Pharmaceutical and medicine manufacturing	234	26,720	\$159,263	\$4,255,547,311
3332	Industrial machinery manufacturing	135	2,898	\$71,199	\$206,327,543
3333	Commercial and service industry machinery	76	1,447	\$66,594	\$96,361,715
3336	Turbine and power transmission equipment mfg.	ND	ND	ND	ND
3341	Computer and peripheral equipment mfg.	47	469	\$104,035	\$48,749,285
3342	Communications equipment manufacturing	105	2,535	\$109,841	\$278,492,984
3343	Audio and video equipment manufacturing	ND	ND	ND	ND
3344	Semiconductor and electronic component mfg.	187	7,644	\$69,310	\$529,779,545
3345	Electronic instrument manufacturing	310	12,606	\$94,883	\$1,196,093,268
3346	Magnetic media manufacturing and reproducing	ND	ND	ND	ND
3353	Electrical equipment manufacturing	75	2,061	\$67,552	\$139,252,110
3364	Aerospace product and parts manufacturing	24	1,499	\$71,204	\$106,705,862
ND: Data for industries with few units or for industries where one employer makes up a significant portion of industry employment have been suppressed.					
Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages					



Wages in the information component was 98.7 percent of the technology cluster average in 2013.

Technology Cluster: Information Sector, 2013 Annual Averages					
NAICS4	Industry	Units	Employment	Wages	
			Average	Average	Total
	<b>All Cluster Industries</b>	<b>26,499</b>	<b>354,640</b>	<b>\$110,952</b>	<b>\$39,348,135,926</b>
	<b>Information</b>	<b>2,172</b>	<b>49,355</b>	<b>\$109,557</b>	<b>\$5,407,187,454</b>
5112	Software publishers	355	4,847	\$125,761	\$609,595,815
5171	Wired telecommunications carriers	450	27,098	\$114,052	\$3,090,530,130
5172	Wireless telecommunications carriers	176	1,931	\$84,561	\$163,265,934
5174	Satellite telecommunications	21	125	\$80,411	\$10,078,208
5179	Other telecommunications	329	2,792	\$89,287	\$249,289,592
5182	Data processing and related services	506	7,334	\$105,578	\$774,268,043
5191	Other information services	335	5,228	\$97,588	\$510,159,732
Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages					



# Technology Industry Cluster:

Regional and County  
Employment Analysis

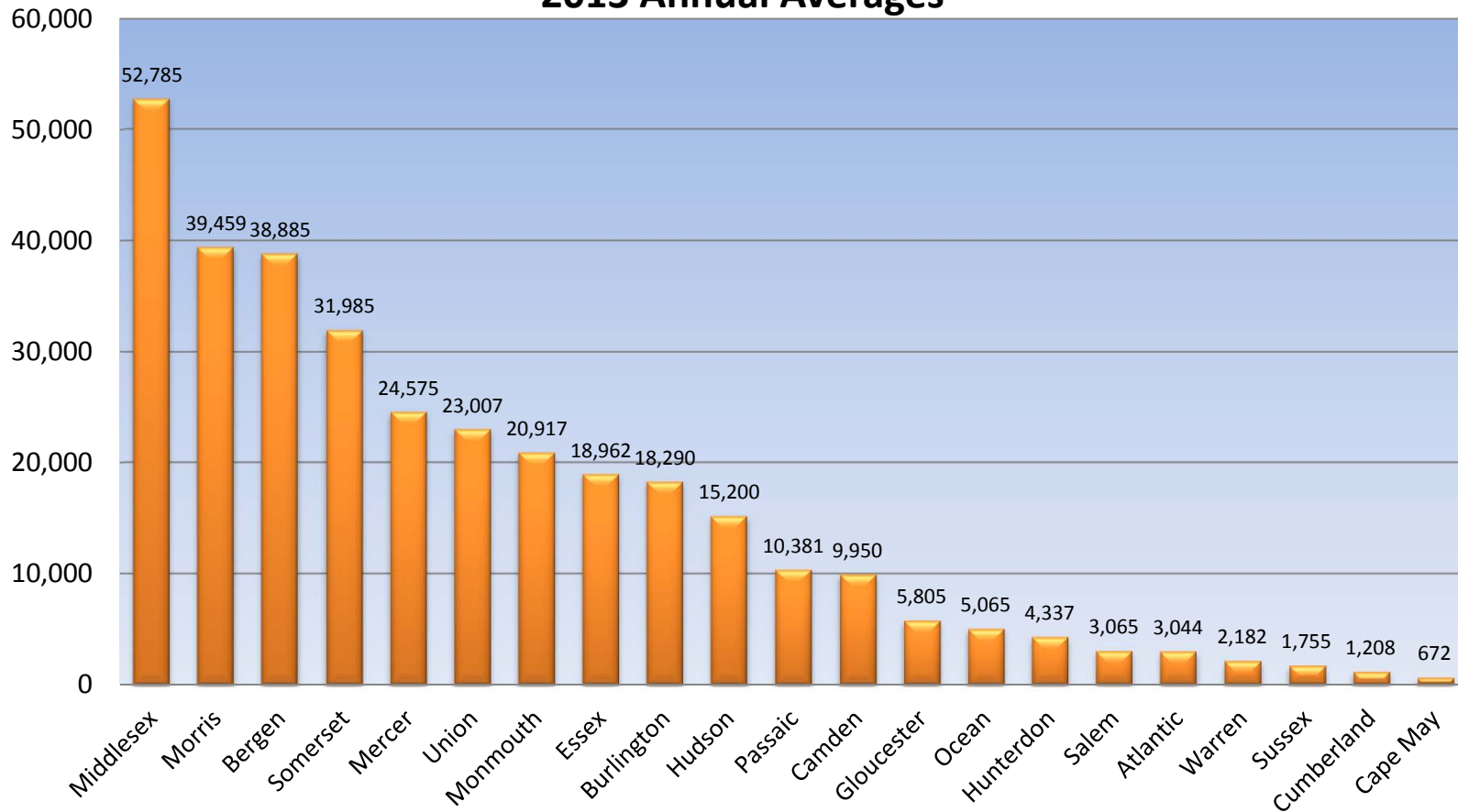
Traditional Labor Market  
Information View

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# Middlesex County led the state's technology industry cluster with 52,785 jobs in 2013.

## Technology Cluster Employment by County 2013 Annual Averages



Source: Quarterly Census of Employment & Wages, 2013 Annual Average



**Technology Sector Employment, Wages & Establishments: 2013 Annual Averages  
New Jersey & Counties**

Eight counties  
accounted for  
60 percent of  
the technology  
establishments  
in New Jersey

Area	Establishments	Annual Averages		Total Wages
		Employment	Wages	
New Jersey	26,499	354,640	\$110,952	\$39,348,135,926
Atlantic	293	3,044	\$81,835	\$249,104,441
Bergen	2,963	38,885	\$98,554	\$3,832,256,556
Burlington	1,065	18,290	\$90,499	\$1,655,229,175
Camden	789	9,950	\$83,454	\$830,365,453
Cape May	108	672	\$66,754	\$44,859,005
Cumberland	96	1,208	\$60,356	\$72,909,445
Essex	1,314	18,962	\$110,796	\$2,100,911,318
Gloucester	396	5,805	\$70,192	\$407,465,355
Hudson	940	15,200	\$125,607	\$1,909,224,003
Hunterdon	454	4,337	\$120,925	\$524,452,985
Mercer	1,661	24,575	\$123,889	\$3,044,569,011
Middlesex	3,343	52,785	\$99,152	\$5,233,754,574
Monmouth	1,902	20,917	\$101,411	\$2,121,212,122
Morris	2,090	39,459	\$121,009	\$4,774,878,231
Ocean	556	5,065	\$74,434	\$377,007,312
Passaic	762	10,381	\$88,186	\$915,458,566
Salem	52	3,065	\$109,231	\$334,791,733
Somerset	1,568	31,985	\$141,409	\$4,522,973,766
Sussex	257	1,755	\$78,509	\$137,783,015
Union	965	23,007	\$152,023	\$3,497,591,982
Warren	193	2,182	\$77,623	\$169,372,674
UNDISTRIBUTED	4,763	23,114	\$112,138	\$2,591,965,204

Note: Undistributed refers to establishments not allocated to a specific county  
Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



## Technology Cluster: Component Sectors, 2013 Annual Averages New Jersey and Counties

Morris County's manufacturing employment includes over 6,600 jobs in pharmaceutical & medicine manufacturing

Area	TOTAL	Professional, Scientific & Technical Services	Manufacturing	Wholesale Trade	Information	Utilities
Atlantic	3,044	1,954	376	183	211	320
Bergen	38,885	19,326	6,873	8,708	3,694	198
Burlington	18,290	7,257	5,667	3,332	1,719	315
Camden	9,950	4,587	2,600	1,137	1,527	99
Cape May	672	392	65	39	76	100
Cumberland	1,208	276	179	138	574	ND
Essex	18,962	8,491	3,365	3,132	3,653	315
Gloucester	5,805	1,819	1,489	2,043	357	81
Hudson	15,200	9,277	381	1,951	3,110	481
Hunterdon	4,337	2,876	599	552	230	80
Mercer	24,575	16,264	3,352	1,844	2,725	390
Middlesex	52,785	26,822	9,531	9,431	6,742	259
Monmouth	20,917	10,998	2,554	1,638	5,236	491
Morris	39,459	17,364	11,640	6,035	3,989	431
Ocean	5,065	2,516	552	579	610	808
Passaic	10,381	3,490	3,953	1,744	828	366
Salem	3,065	52	1,067	46	58	ND
Somerset	31,985	14,110	6,886	5,228	5,759	ND
Sussex	1,755	720	585	168	134	ND
Union	23,007	8,380	6,223	3,206	4,772	426
Warren	2,182	593	1,099	240	125	125
UNDISTRIBUTED	23,114	14,645	604	4,565	3,230	66
New Jersey	354,640	172,210	69,642	55,938	49,355	7,383

Note: Undistributed refers to establishments not allocated to a specific county

Source: New Jersey Department of Labor & Workforce Development, Quarterly Census of Employment and Wages, 2013 Annual Averages



STATE OF NEW JERSEY

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

**Technology Sector Employment, Wages & Establishments (2013 Annual Averages): Ranked by Employment  
New Jersey, Region & Counties**

The northern and central regions of the state is where over 81 percent of the technology employment can be found.

Burlington County led the southern portion of the state with almost 18,300 technology jobs.

Area	Region	Establishments	Annual Averages		
			Employment	Wages	Total Wages
<b>New Jersey</b>		<b>26,499</b>	<b>354,640</b>	<b>\$110,952</b>	<b>\$39,348,135,926</b>
<b>Northern Region</b>		<b>9,938</b>	<b>154,168</b>	<b>\$115,860</b>	<b>\$17,861,929,330</b>
Morris	North	2,090	39,459	\$121,009	\$4,774,878,231
Bergen	North	2,963	38,885	\$98,554	\$3,832,256,556
Union	North	965	23,007	\$152,023	\$3,497,591,982
Essex	North	1,314	18,962	\$110,796	\$2,100,911,318
Hudson	North	940	15,200	\$125,607	\$1,909,224,003
Passaic	North	762	10,381	\$88,186	\$915,458,566
Hunterdon	North	454	4,337	\$120,925	\$524,452,985
Warren	North	193	2,182	\$77,623	\$169,372,674
Sussex	North	257	1,755	\$78,509	\$137,783,015
<b>Central Region</b>		<b>9,030</b>	<b>135,327</b>	<b>\$113,056</b>	<b>\$15,299,516,785</b>
Middlesex	Central	3,343	52,785	\$99,152	\$5,233,754,574
Somerset	Central	1,568	31,985	\$141,409	\$4,522,973,766
Mercer	Central	1,661	24,575	\$123,889	\$3,044,569,011
Monmouth	Central	1,902	20,917	\$101,411	\$2,121,212,122
Ocean	Central	556	5,065	\$74,434	\$377,007,312
<b>Southern Region</b>		<b>7,562</b>	<b>65,148</b>	<b>\$94,964</b>	<b>\$6,186,689,811</b>
Burlington	South	1,065	18,290	\$90,499	\$1,655,229,175
Camden	South	789	9,950	\$83,454	\$830,365,453
Gloucester	South	396	5,805	\$70,192	\$407,465,355
Salem	South	52	3,065	\$109,231	\$334,791,733
Atlantic	South	293	3,044	\$81,835	\$249,104,441
Cumberland	South	96	1,208	\$60,356	\$72,909,445
Cape May	South	108	672	\$66,754	\$44,859,005
UNDISTRIBUTED		<b>4,763</b>	<b>23,114</b>	<b>\$112,138</b>	<b>\$2,591,965,204</b>

Note: Undistributed refers to establishments not allocated to a specific county

Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



**Professional, Scientific, and Technical Services Services: Employment, Wages & Establishments  
New Jersey & Counties  
(2013 Annual Averages)**

Establishments in the professional, scientific and technical services industry, are primarily located in the state's high-tech corridor that stretches from Mercer through Bergen counties. The industry is dominated by STEM occupations.

Area	Establishments	Annual Averages		Total Wages
		Employment	Wages	
New Jersey	19,699	172,210	\$108,753.44	\$18,728,429,490
Atlantic	236	1,954	\$78,032.01	\$152,474,544
Bergen	2,048	19,326	\$95,968.17	\$1,854,680,882
Burlington	762	7,257	\$85,356.97	\$619,435,532
Camden	550	4,587	\$72,174.85	\$331,066,051
Cape May	77	392	\$59,008.45	\$23,131,313
Cumberland	56	276	\$45,428.11	\$12,538,157
Essex	906	8,491	\$135,445.99	\$1,150,071,872
Gloucester	283	1,819	\$76,692.17	\$139,503,049
Hudson	699	9,277	\$138,321.80	\$1,283,211,338
Hunterdon	352	2,876	\$115,540.02	\$332,293,105
Mercer	1,403	16,264	\$122,270.61	\$1,988,609,131
Middlesex	2,583	26,822	\$97,815.04	\$2,623,595,107
Monmouth	1,482	10,998	\$101,169.57	\$1,112,662,897
Morris	1,497	17,364	\$111,012.67	\$1,927,623,974
Ocean	413	2,516	\$61,071.47	\$153,655,815
Passaic	486	3,490	\$79,787.89	\$278,459,745
Salem	22	52	\$57,481.40	\$2,989,033
Somerset	1,256	14,110	\$123,574.67	\$1,743,638,548
Sussex	207	720	\$70,033.26	\$50,423,949
Union	663	8,380	\$168,109.93	\$1,408,761,201
Warren	124	593	\$63,540.38	\$37,679,446
UNDISTRIBUTED	3,604	14,645	\$102,555.47	\$1,501,924,801

Note: Undistributed refers to establishments not allocated to a specific county

Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



Computer Systems Design and related services establishments provide expertise in the field of information technologies. Including software development, planning and development of computer systems and managing onsite computer systems for clients.

Middlesex County accounts for 19 percent of the establishments and 20 percent of the employment in this sector statewide.

**Computer Systems Design and Related Services: Employment, Wages & Establishments  
New Jersey & Counties  
(2013 Annual Averages)**

Area	Establishments	Annual Averages		Total Wages
		Employment	Wages	
New Jersey	8,734	68,100	\$108,749	\$7,405,838,891
Atlantic	80	934	\$89,626	\$83,718,045
Bergen	790	9,369	\$102,752	\$962,662,087
Burlington	267	2,734	\$97,319	\$266,070,655
Camden	175	841	\$87,447	\$73,520,969
Cape May	12	57	\$85,458	\$4,864,004
Cumberland	ND	ND	ND	ND
Essex	336	2,806	\$109,779	\$308,038,490
Gloucester	ND	ND	ND	ND
Hudson	393	5,840	\$155,949	\$910,793,752
Hunterdon	110	406	\$110,220	\$44,694,015
Mercer	525	4,418	\$96,769	\$427,524,528
Middlesex	1,666	13,925	\$98,528	\$1,372,021,475
Monmouth	525	2,965	\$99,480	\$294,925,826
Morris	594	6,296	\$101,928	\$641,769,843
Ocean	123	476	\$71,091	\$33,839,444
Passaic	171	684	\$86,355	\$59,103,020
Salem	6	9	\$15,625	\$139,326
Somerset	511	5,944	\$134,422	\$798,984,934
Sussex	58	165	\$82,519	\$13,643,210
Union	216	1,719	\$116,178	\$199,652,716
Warren	36	90	\$62,328	\$5,588,771
UNDISTRIBUTED	2,072	8,224	\$107,308	\$882,502,064

ND: Data for industries with few units or for industries where one employer makes up a significant of industry employment have been suppressed.

Note: Undistributed refers to establishments not allocated to a specific county

Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



**Architectural and Engineering Services: Employment, Wages & Establishments  
New Jersey & Counties  
(2013 Annual Averages)**

Architectural and Engineering Services industry is distributed fairly evenly from Camden and Burlington counties in the southern part of the state through the central counties up through the northeastern counties.

Not surprisingly the Architecture and Engineering occupational group makes-up about 44 percent of the occupational employment in this industry.

Area	Establishments	Annual Averages		Total Wages
		Employment	Wages	
New Jersey	3,378	36,387	\$88,265	\$3,211,676,832
Atlantic	73	610	\$61,574	\$37,529,410
Bergen	388	3,453	\$88,374	\$305,148,794
Burlington	190	2,574	\$84,302	\$217,029,067
Camden	150	1,548	\$74,972	\$116,069,024
Cape May	34	175	\$55,593	\$9,742,641
Cumberland	24	176	\$48,548	\$8,556,577
Essex	199	2,811	\$92,614	\$260,354,425
Gloucester	78	614	\$63,175	\$38,804,961
Hudson	80	878	\$77,120	\$67,717,958
Hunterdon	88	1,026	\$106,308	\$109,019,186
Mercer	195	3,114	\$95,314	\$296,847,924
Middlesex	306	4,434	\$95,479	\$423,393,200
Monmouth	277	3,122	\$98,213	\$306,612,083
Morris	331	3,881	\$92,654	\$359,553,402
Ocean	127	1,236	\$60,300	\$74,546,467
Passaic	118	1,543	\$82,647	\$127,510,629
Salem	11	32	\$74,309	\$2,340,737
Somerset	184	2,046	\$95,088	\$194,525,443
Sussex	65	289	\$60,098	\$17,358,309
Union	125	1,195	\$75,697	\$90,451,410
Warren	39	258	\$67,551	\$17,400,000
UNDISTRIBUTED	298	1,372	\$95,584	\$131,165,185

Note: Undistributed refers to establishments not allocated to a specific county  
Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



**Management and Technical Consulting Services: Employment, Wages & Establishments  
New Jersey & Counties  
(2013 Annual Averages)**

Morris County had the most industry employment (6,226 jobs) and the highest annual average wage (\$129,590) of any county in the state in 2013.

Area	Establishments	Annual Averages		Total Wages
		Employment	Wages	
New Jersey	6,900	40,580	\$88,721	\$3,600,278,780
Atlantic	75	339	\$71,234	\$24,130,651
Bergen	819	4,543	\$84,449	\$383,645,103
Burlington	281	1,715	\$66,643	\$114,298,457
Camden	212	1,974	\$59,962	\$118,350,444
Cape May	28	138	\$55,929	\$7,722,872
Cumberland	21	69	\$37,311	\$2,565,159
Essex	340	1,996	\$97,232	\$194,106,630
Gloucester	134	729	\$55,961	\$40,790,658
Hudson	215	1,868	\$94,201	\$175,974,931
Hunterdon	143	572	\$92,195	\$52,758,689
Mercer	597	3,034	\$93,387	\$283,343,258
Middlesex	516	3,357	\$83,532	\$280,410,528
Monmouth	647	2,501	\$68,198	\$170,592,708
Morris	520	6,226	\$129,590	\$806,835,398
Ocean	155	777	\$55,761	\$43,331,327
Passaic	185	1,127	\$71,775	\$80,854,834
Salem	5	11	\$45,242	\$508,970
Somerset	500	2,748	\$88,566	\$243,343,728
Sussex	76	252	\$71,501	\$18,048,024
Union	281	2,042	\$75,100	\$153,361,123
Warren	44	212	\$47,236	\$9,998,204
UNDISTRIBUTED	1,107	4,350	\$90,877	\$395,307,084

Note: Undistributed refers to establishments not allocated to a specific county

Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



**Manufacturing: Employment, Wages & Establishments: 2013 Annual Averages  
New Jersey & Counties**

The state's high technology manufacturing sector is led by the pharmaceutical and medicine (Morris, Middlesex, Passaic & Union counties) and medical device (Burlington & Passaic counties) manufacturing industries.

Area	Establishments	Annual Averages		Total Wages
		Employment	Wages	
New Jersey	1,473	69,642	\$115,735.23	\$8,060,032,976
Atlantic	8	376	\$98,015.59	\$36,853,863
Bergen	178	6,873	\$84,356.67	\$579,783,370
Burlington	66	5,667	\$100,998.52	\$572,358,609
Camden	59	2,600	\$84,255.48	\$219,064,254
Cape May	6	65	\$63,049.03	\$4,098,187
Cumberland	10	179	\$59,148.26	\$10,587,539
Essex	106	3,365	\$74,893.82	\$252,017,710
Gloucester	28	1,489	\$82,293.52	\$122,535,050
Hudson	30	381	\$75,723.68	\$28,850,722
Hunterdon	29	599	\$70,116.31	\$41,999,672
Mercer	57	3,352	\$168,569.29	\$565,044,250
Middlesex	175	9,531	\$100,359.87	\$956,529,885
Monmouth	79	2,554	\$65,345.66	\$166,892,813
Morris	147	11,640	\$133,800.05	\$1,557,432,565
Ocean	23	552	\$67,842.47	\$37,449,042
Passaic	89	3,953	\$96,855.74	\$382,870,736
Salem	10	1,067	\$84,464.01	\$90,123,095
Somerset	85	6,886	\$146,780.49	\$1,010,730,420
Sussex	9	585	\$66,440.95	\$38,867,956
Union	73	6,223	\$196,975.25	\$1,225,776,982
Warren	27	1,099	\$72,369.08	\$79,533,619
UNDISTRIBUTED	188	604	\$133,497.74	\$80,632,637

Note: Undistributed refers to establishments not allocated to a specific county  
Source: NJLWD, Quarterly Census of Employment & Wages, 2013 Annual Averages



# Technology Industry Cluster:

Occupational Analysis

Traditional Labor Market  
Information View

Winter 2014 – 2015

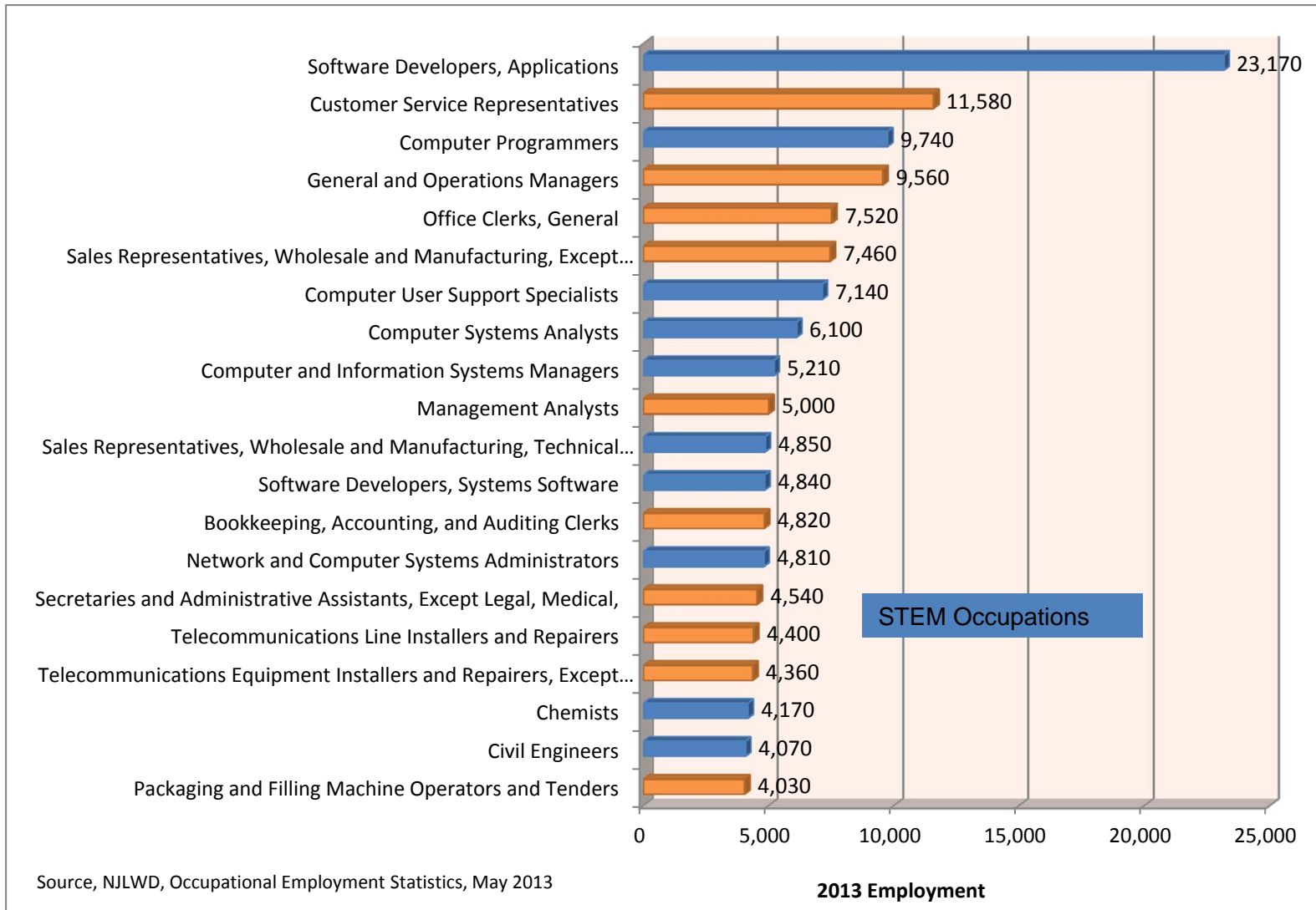


# Occupational Overview

- The Technology Cluster overall consists of 328 different occupations (Occupational Employment Statistics, May 2013)
- Cluster occupations had an estimated employment of 355,740 statewide in 2013 or about 9.3 percent of the statewide total occupational employment.
- Science, Technology, Engineering & Mathematics (STEM) occupations within the Technology Industry Cluster accounted for 3.4 percent of the statewide total occupational employment (2013).
- However, STEM occupations were responsible for 131,460 jobs or 37.0 percent of the employment within the Technology Industry Cluster (2013).



## Top Twenty Technology Cluster Occupations accounted 41.4 percent of total cluster occupational employment in 2013



Ten of the top twenty occupations are Science, Technology, Engineering and Math occupations and make-up 17.2 percent of total cluster employment

## Science, Technology, Engineering and Mathematical (STEM) Occupations accounted for 37 percent of cluster occupational employment in 2013

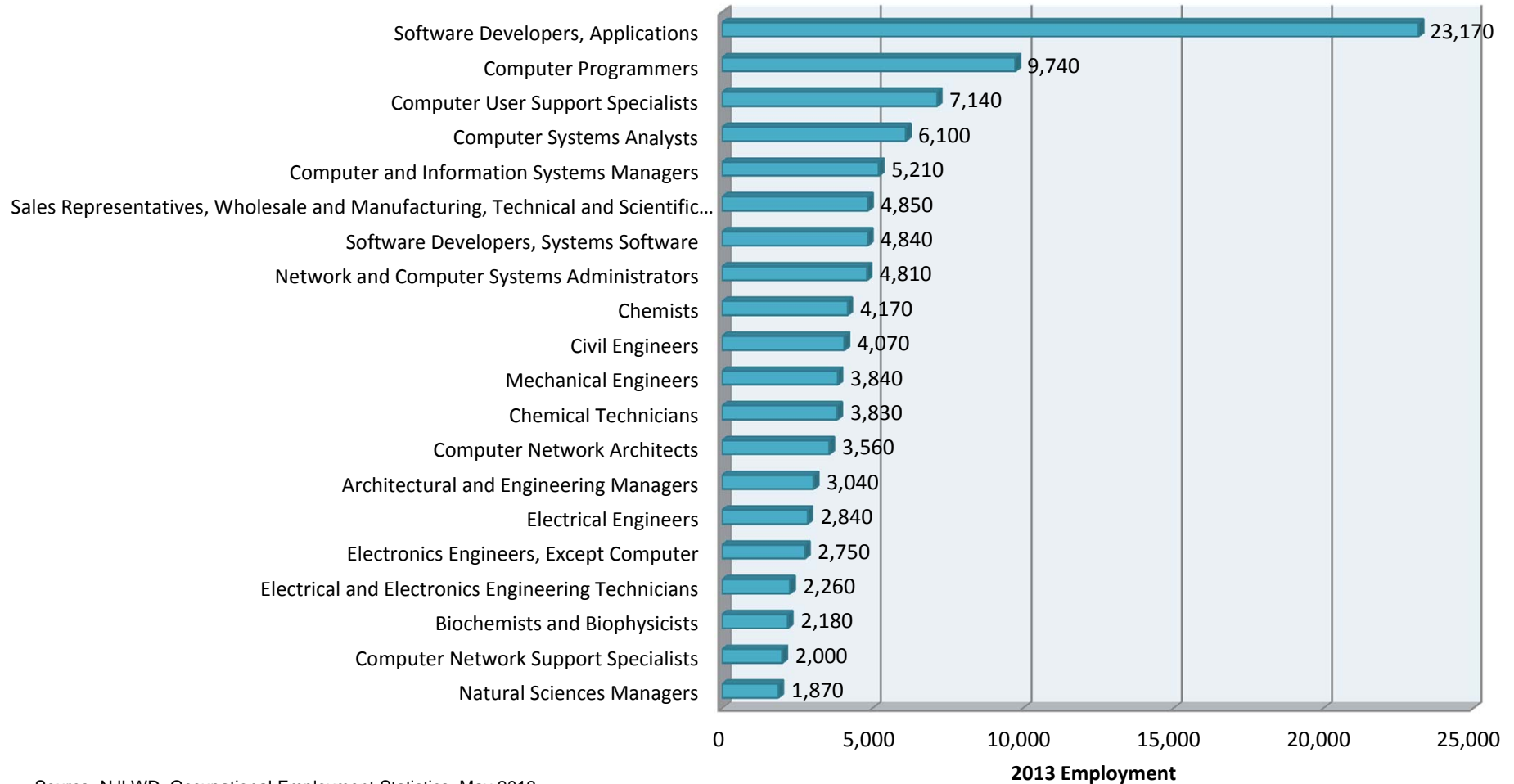
<b>Technology Industry Cluster: Top Occupational Groups</b>			
<b>Occupational Title</b>	<b>2013 Employment</b>	<b>Percent of Total Employment</b>	<b>2013 Average Salary</b>
<b>Total All Occupations</b>	<b>355,740</b>	<b>100.0%</b>	<b>\$78,073</b>
Computer and Mathematical Occupations	70,680	<b>19.9%</b>	\$90,888
Office and Administrative Support Occupations	56,140	<b>15.8%</b>	\$40,964
Management Occupations	39,340	<b>11.1%</b>	\$151,773
Business and Financial Operations Occupations	37,610	<b>10.6%</b>	\$80,324
Architecture and Engineering Occupations	32,830	<b>9.2%</b>	\$84,617
Production Occupations	31,260	<b>8.8%</b>	\$41,960
Sales and Related Occupations	26,450	<b>7.4%</b>	\$80,495
Installation, Maintenance, and Repair Occupations	19,180	<b>5.4%</b>	\$61,948
Life, Physical, and Social Science Occupations	18,720	<b>5.3%</b>	\$78,361
<b><i>Science, Technology, Engineering, Mathematical Occupations</i></b>	<b><i>131,460</i></b>	<b><i>37.0%</i></b>	<b><i>\$92,785</i></b>

Source: NJLWD, Occupational Employment Statistics, May 2013



# The top five STEM occupations are related to computers

## Employment by Occupation for the Largest STEM Occupations

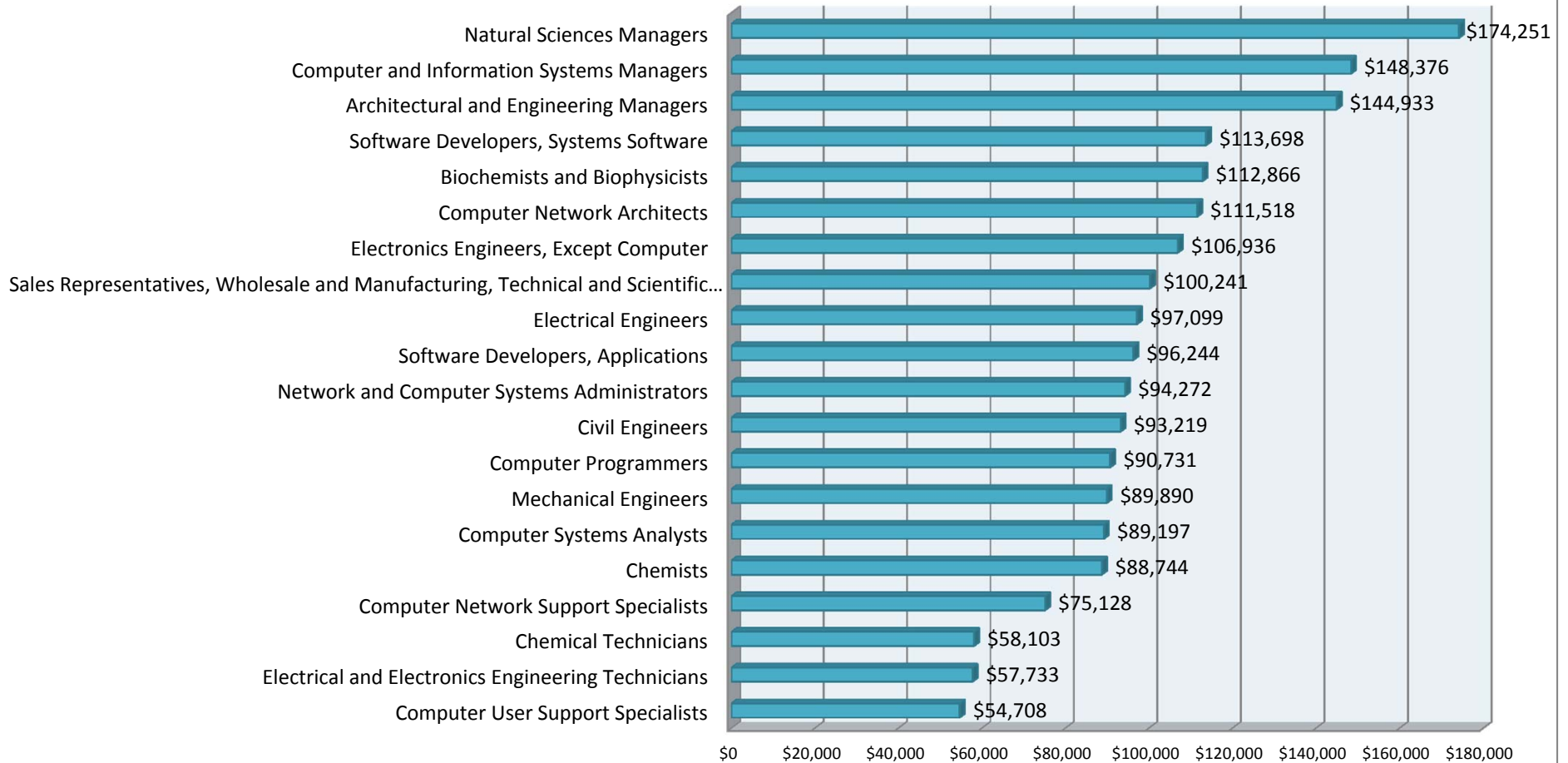


Source: NJLWD, Occupational Employment Statistics, May 2013



The top twenty STEM occupations all had an average annual salary above the state's average (\$52,800) in 2013

### 2013 Annual Average Salary for the Largest STEM Occupations



Source: NJLWD, Occupational Employment Statistics, May 2013

2013 Annual Average Salary



STATE OF NEW JERSEY

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

# Technology Industry STEM Occupations 2013 Employment, Wages and Education Requirements

Standard Occupational Code	Occupation Description	2013 Employment	2013 Annual Average Salary	Education requirements
15-1132	Software Developers, Applications	23,170	\$96,244	Bachelor's degree
15-1131	Computer Programmers	9,740	\$90,731	Bachelor's degree
15-1151	Computer User Support Specialists	7,140	\$54,708	Some college, no degree
15-1121	Computer Systems Analysts	6,100	\$89,197	Bachelor's degree
11-3021	Computer and Information Systems Managers	5,210	\$148,376	Bachelor's degree
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	4,850	\$100,241	Bachelor's degree
15-1133	Software Developers, Systems Software	4,840	\$113,698	Bachelor's degree
15-1142	Network and Computer Systems Administrators	4,810	\$94,272	Bachelor's degree
15-1199	Computer Occupations, All Other	4,280	\$74,799	Bachelor's degree
19-2031	Chemists	4,170	\$88,744	Bachelor's degree
17-2051	Civil Engineers	4,070	\$93,219	Bachelor's degree
17-2141	Mechanical Engineers	3,840	\$89,890	Bachelor's degree
19-4031	Chemical Technicians	3,830	\$58,103	Associate's degree
15-1143	Computer Network Architects	3,560	\$111,518	Bachelor's degree
11-9041	Architectural and Engineering Managers	3,040	\$144,933	Bachelor's degree
17-2071	Electrical Engineers	2,840	\$97,099	Bachelor's degree
17-2072	Electronics Engineers, Except Computer	2,750	\$106,936	Bachelor's degree
17-3023	Electrical and Electronics Engineering Technicians	2,260	\$57,733	Associate's degree
19-1021	Biochemists and Biophysicists	2,180	\$112,866	Doctoral or professional degree
15-1152	Computer Network Support Specialists	2,000	\$75,128	Some college, no degree
11-9121	Natural Sciences Managers	1,870	\$174,251	Bachelor's degree
19-4021	Biological Technicians	1,720	\$56,097	Bachelor's degree
15-1141	Database Administrators	1,610	\$93,992	Bachelor's degree
17-2112	Industrial Engineers	1,570	\$83,821	Bachelor's degree
17-2199	Engineers, All Other	1,560	\$91,666	Bachelor's degree
17-3011	Architectural and Civil Drafters	1,440	\$50,893	Associate's degree
17-2081	Environmental Engineers	1,360	\$81,079	Bachelor's degree
41-9031	Sales Engineers	1,300	\$104,750	Bachelor's degree
19-2041	Environmental Scientists and Specialists, Including Health	1,210	\$76,999	Bachelor's degree
19-1042	Medical Scientists, Except Epidemiologists	1,140	\$106,558	Doctoral or professional degree
17-2041	Chemical Engineers	1,120	\$109,899	Bachelor's degree
15-1134	Web Developers	980	\$76,470	Bachelor's degree
17-3022	Civil Engineering Technicians	860	\$42,643	Associate's degree
19-4091	Environmental Science and Protection Technicians, Including Health	800	\$46,771	Associate's degree
17-3013	Mechanical Drafters	640	\$60,086	Associate's degree
17-3027	Mechanical Engineering Technicians	550	\$61,272	Associate's degree



## Technology Industry STEM Occupations 2013 Employment, Wages and Education Requirements (Cont.)

Standard Occupational Code	Occupation Description	2013 Employment	2013 Annual Average Salary	Education requirements
19-2042	Geoscientists, Except Hydrologists and Geographers	520	\$76,862	Bachelor's degree
19-2012	Physicists	470	\$107,732	Doctoral or professional degree
17-3025	Environmental Engineering Technicians	460	\$47,429	Associate's degree
15-1122	Information Security Analysts	430	\$96,385	Bachelor's degree
17-3031	Surveying and Mapping Technicians	380	\$42,059	High school diploma or equivalent
17-3012	Electrical and Electronics Drafters	370	\$67,072	Associate's degree
17-2161	Nuclear Engineers	360	\$104,094	Bachelor's degree
17-3029	Engineering Technicians, Except Drafters, All Other	360	\$66,695	Associate's degree
17-2061	Computer Hardware Engineers	320	\$107,646	Bachelor's degree
15-1111	Computer and Information Research Scientists	310	\$121,374	Doctoral or professional degree
17-3019	Drafters, All Other	280	\$51,835	Associate's degree
19-1029	Biological Scientists, All Other	250	\$78,242	Doctoral or professional degree
15-2041	Statisticians	240	\$117,473	Master's degree
19-1022	Microbiologists	240	\$63,849	Bachelor's degree
17-3021	Aerospace Engineering and Operations Technicians	230	\$61,653	Associate's degree
17-3024	Electro-Mechanical Technicians	230	\$65,925	Associate's degree
17-3026	Industrial Engineering Technicians	230	\$52,897	Associate's degree
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	220	\$88,699	Bachelor's degree
17-2031	Biomedical Engineers	180	\$116,915	Bachelor's degree
19-2032	Materials Scientists	170	\$97,081	Bachelor's degree
15-2021	Mathematicians	150	\$146,322	Master's degree
19-2099	Physical Scientists, All Other	140	\$108,345	Bachelor's degree
17-2131	Materials Engineers	120	\$90,600	Bachelor's degree
15-2011	Actuaries	100	\$138,182	Bachelor's degree
15-2099	Mathematical Science Occupations, All Other	90	\$68,612	Bachelor's degree
19-4041	Geological and Petroleum Technicians	90	\$51,975	Associate's degree
19-2043	Hydrologists	60	\$91,464	Master's degree
17-2121	Marine Engineers and Naval Architects	40	\$101,981	Bachelor's degree
19-1041	Epidemiologists	10	\$109,706	Master's degree



## Technology Cluster Industries Ranked by 2013 Average Annual Salary

NAICS4	Description	Estimated Occupational Employment	2013 Average Salary	Average Salary Rank
5417	Scientific Research and Development Services	28,460	\$96,177	1
5112	Software Publishers	4,580	\$94,064	2
5415	Computer Systems Design and Related Services	67,750	\$91,061	3
5172	Wireless Telecommunications Carriers (except Satellite)	3,330	\$89,511	4
2211	Electric Power Generation, Transmission and Distribution	7,390	\$84,476	5
5179	Other Telecommunications	2,570	\$82,378	6
4242	Drugs and Druggists' Sundries Merchant Wholesalers	13,530	\$80,776	7
5171	Wired Telecommunications Carriers	27,240	\$79,127	8
5413	Architectural, Engineering, and Related Services	35,530	\$77,602	9
5182	Data Processing, Hosting, and Related Services	7,410	\$77,094	10
3251	Basic Chemical Manufacturing	6,490	\$76,532	11
3341	Computer and Peripheral Equipment Manufacturing	470	\$75,819	12
5416	Management, Scientific, and Technical Consulting Services	39,840	\$75,815	13
3241	Petroleum and Coal Products Manufacturing	3,140	\$73,937	14
4236	Electrical and Electronic Goods Merchant Wholesalers	13,760	\$72,696	15
3342	Communications Equipment Manufacturing	2,470	\$70,994	16
5174	Satellite Telecommunications	70	\$70,913	17
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	12,830	\$70,822	18
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	28,350	\$66,866	19
3364	Aerospace Product and Parts Manufacturing	1,640	\$65,115	20
5191	Other Information Services	5,050	\$62,815	21
3332	Industrial Machinery Manufacturing	2,950	\$59,982	22
3333	Commercial and Service Industry Machinery Manufacturing	1,420	\$58,511	23
3344	Semiconductor and Other Electronic Component Manufacturing	7,630	\$58,217	24
3252	Resin, Synthetic Rubber, and Artificial Synthetic Fibers and Filaments Manufacturing	890	\$58,128	25
3353	Electrical Equipment Manufacturing	2,050	\$57,483	26
3254	Pharmaceutical and Medicine Manufacturing	27,090	\$57,209	27
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	1,100	\$56,857	28

Source: NJLWD, Occupational Employment Statistics, May 2013



STATE OF NEW JERSEY

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

# Technology Industry Cluster: Occupational Analysis for Selected Industries

Traditional Labor Market  
Information View  
Winter 2014 – 2015



## The average salary in Computer Systems Design and Related Services is 116.6 percent of the technology cluster average.

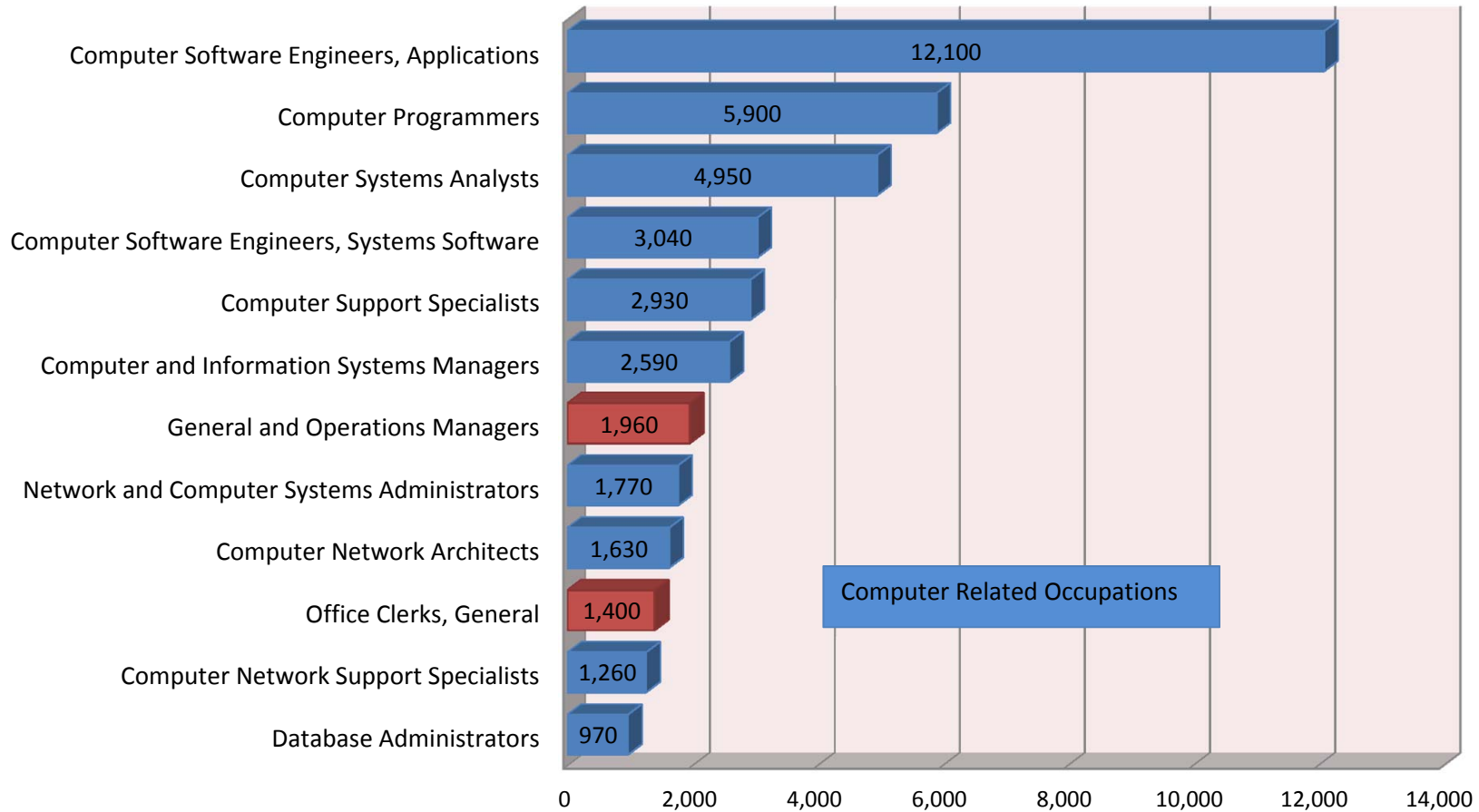
<b>Computer Systems Design and Related Services: Top Occupations</b>			
<b>Occupational Title</b>	<b>2013 Employment</b>	<b>2013 Average Salary</b>	<b>Education/Training</b>
<b>Total all Cluster Occupations</b>	355,740	\$78,073	
<b>Total all Industry Occupations</b>	67,750	\$91,061	
Software Developers, Applications	15,740	\$95,949	Bachelor's degree
Computer Programmers	7,820	\$92,737	Bachelor's degree
Computer Systems Analysts	3,740	\$88,218	Bachelor's degree
Computer User Support Specialists	3,400	\$55,118	Some college, no degree
Software Developers, Systems Software	2,670	\$120,107	Bachelor's degree
Computer and Information Systems Managers	2,380	\$144,888	Bachelor's degree
Customer Service Representatives	1,950	\$38,283	High school diploma or equivalent
General and Operations Managers	1,920	\$166,035	Associate's degree
Network and Computer Systems Administrators	1,620	\$90,203	Bachelor's degree
Computer Network Architects	1,180	\$105,681	Bachelor's degree
Human Resources Specialists	960	\$67,978	Bachelor's degree
Database Administrators	960	\$93,340	Bachelor's degree
Office Clerks, General	900	\$27,039	High school diploma or equivalent
Computer Network Support Specialists	830	\$74,013	Some college, no degree
Financial Managers	720	\$171,218	Bachelor's degree

Source: NJLWD, Occupational Employment Statistics, May 2013



# The top ten occupations in computer systems design and related services make up 62.6 percent of total industry employment

## Largest Occupations in Computer Systems Design & Related Services



Source: NJLWD, Occupational Employment Statistics, May 2013

2013 Employment



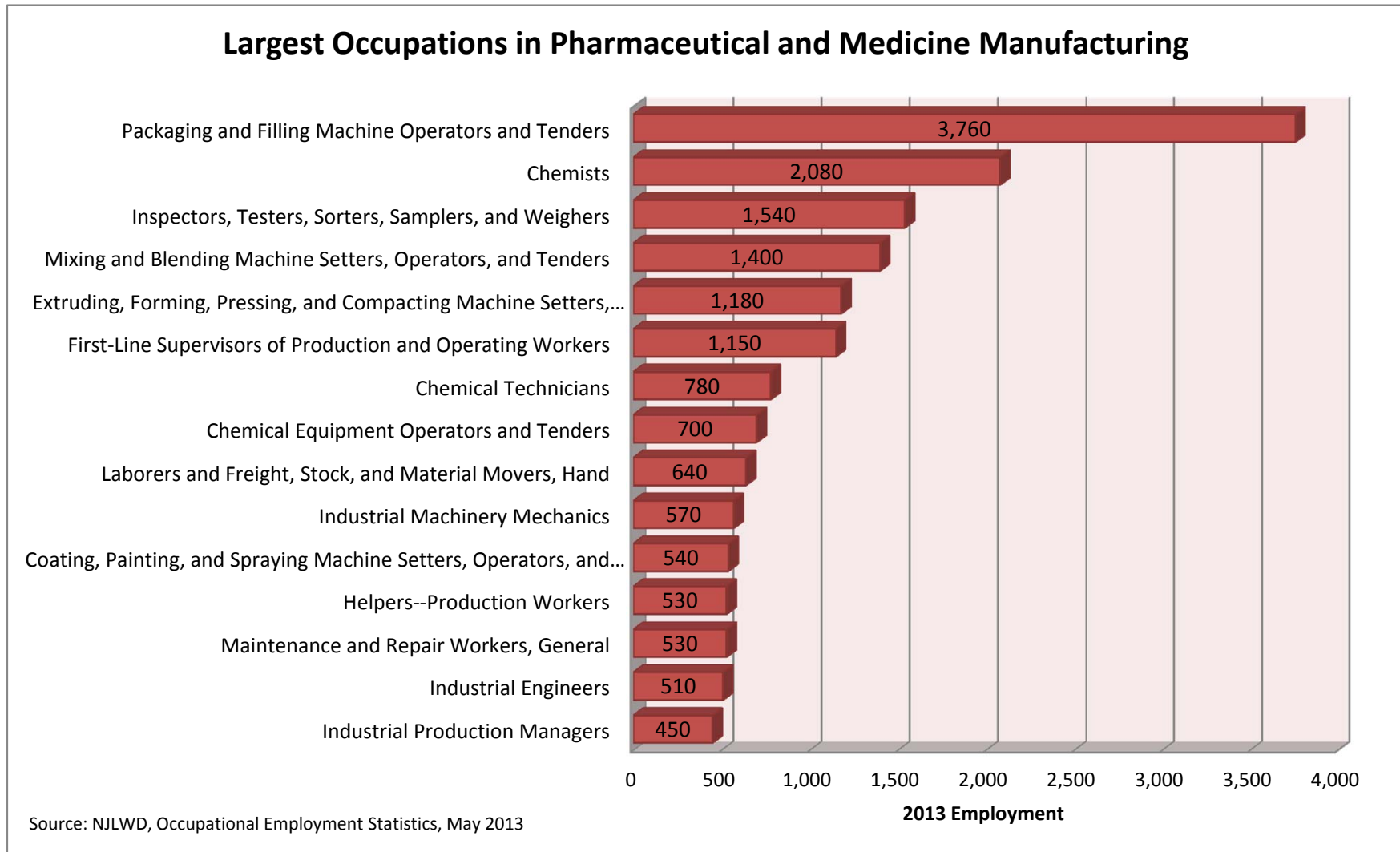
# Occupational employment in the pharmaceutical & medicine manufacturing industry was about 8 percent of the Cluster total

<b>Pharmaceutical and Medicine Manufacturing: Top Occupations</b>			
<b>Occupational Title</b>	<b>2013 Employment</b>	<b>2013 Average Salary</b>	<b>Education/Training</b>
<b>Total all Cluster Occupations</b>	355,740	\$78,073	
<b>Total all Industry Occupations</b>	27,090	\$57,209	
Packaging and Filling Machine Operators and Tenders	3,760	\$28,177	High school diploma or equivalent
Chemists	2,080	\$87,286	Bachelor's degree
Inspectors, Testers, Sorters, Samplers, and Weighers	1,540	\$39,490	High school diploma or equivalent
Mixing and Blending Machine Setters, Operators, and Tenders	1,400	\$39,732	High school diploma or equivalent
Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	1,180	\$37,476	High school diploma or equivalent
First-Line Supervisors of Production and Operating Workers	1,150	\$64,006	Postsecondary non-degree award
Chemical Technicians	780	\$45,234	Associate's degree
Chemical Equipment Operators and Tenders	700	\$40,416	High school diploma or equivalent
Laborers and Freight, Stock, and Material Movers, Hand	640	\$32,230	Less than high school
Industrial Machinery Mechanics	570	\$57,440	High school diploma or equivalent
Coating, Painting, and Spraying Machine Setters, Operators, and Tenders	540	\$37,493	High school diploma or equivalent
Maintenance and Repair Workers, General	530	\$57,443	High school diploma or equivalent
Helpers--Production Workers	530	\$24,003	Less than high school
Industrial Engineers	510	\$80,712	Bachelor's degree
Industrial Production Managers	450	\$138,356	Bachelor's degree

Source: NJLWD, Occupational Employment Statistics, May 2013



Chemists had the second largest occupational employment within the pharmaceutical and medicine manufacturing industry (2013).



# Civil Engineers were responsible for 10.9 percent of the occupational employment in the Architectural, Engineering and Related Services industry

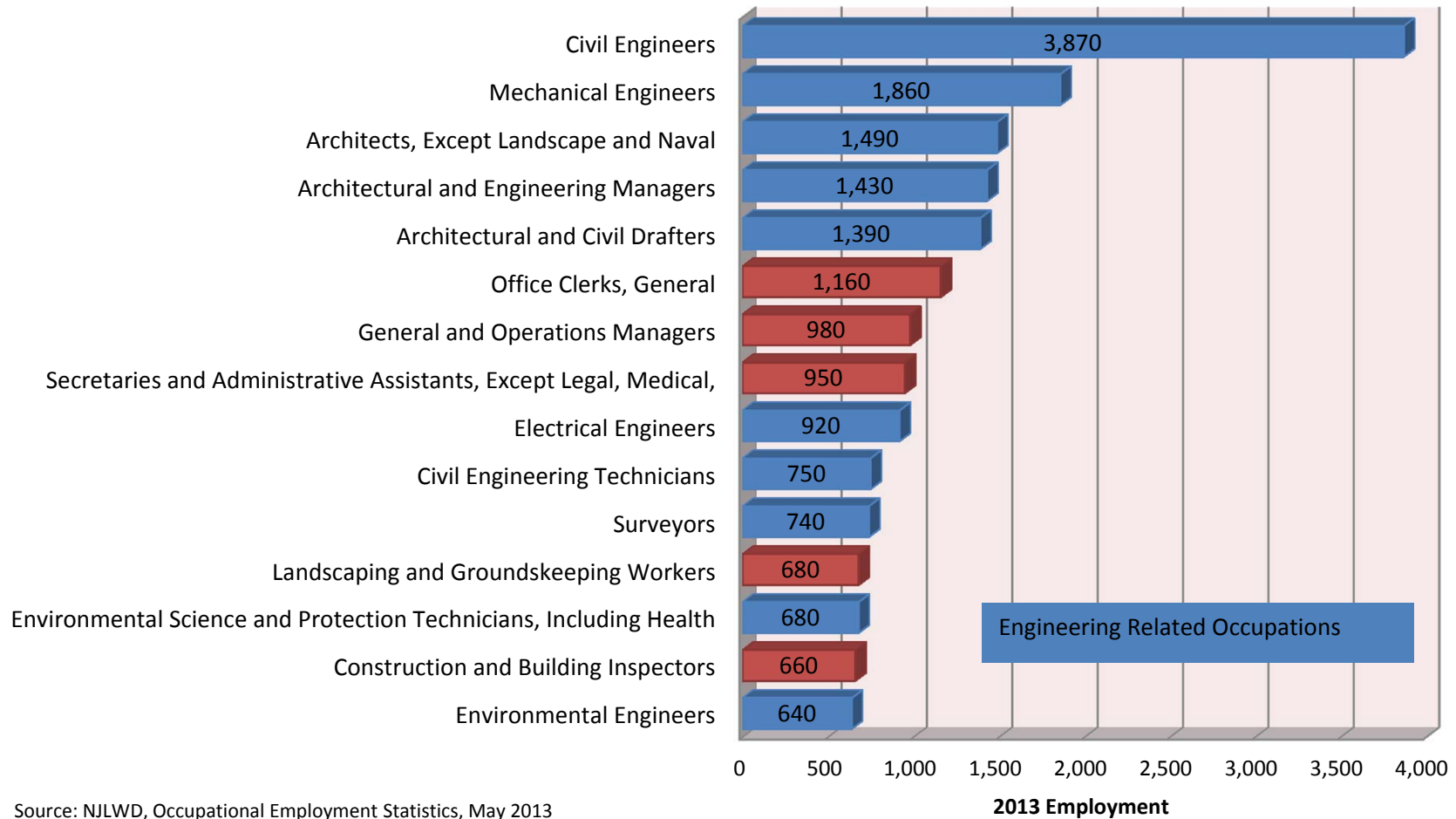
<b>Architectural, Engineering, and Related Services: Top Occupations</b>			
<b>Occupational Title</b>	<b>2013 Employment</b>	<b>2013 Average Salary</b>	<b>Education/Training</b>
<b>Total all Cluster Occupations</b>	355,740	\$78,073	
<b>Total all Industry Occupations</b>	35,530	\$77,602	
Civil Engineers	3,870	\$93,168	Bachelor's degree
Mechanical Engineers	1,860	\$93,257	Bachelor's degree
Architects, Except Landscape and Naval	1,490	\$82,010	Bachelor's degree
Architectural and Engineering Managers	1,430	\$144,374	Bachelor's degree
Architectural and Civil Drafters	1,390	\$50,379	Associate's degree
Office Clerks, General	1,160	\$35,007	High school diploma or equivalent
General and Operations Managers	980	\$162,534	Associate's degree
Secretaries and Administrative Assistants, Except Legal, Medical,	950	\$38,212	High school diploma or equivalent
Electrical Engineers	920	\$96,676	Bachelor's degree
Civil Engineering Technicians	750	\$41,411	Associate's degree
Surveyors	740	\$67,839	Bachelor's degree
Environmental Science and Protection Technicians, Including Health	680	\$46,577	Associate's degree
Landscaping and Groundskeeping Workers	680	\$28,683	Less than high school
Construction and Building Inspectors	660	\$55,936	High school diploma or equivalent
Environmental Engineers	640	\$81,678	Bachelor's degree

Source: NJLWD, Occupational Employment Statistics, May 2013



## The top occupations made-up 51.2 percent of the employment in the Architectural, Engineering & Related Services industry

### Largest Occupations in Architectural, Engineering and Related Services



Source: NJLWD, Occupational Employment Statistics, May 2013



STATE OF NEW JERSEY

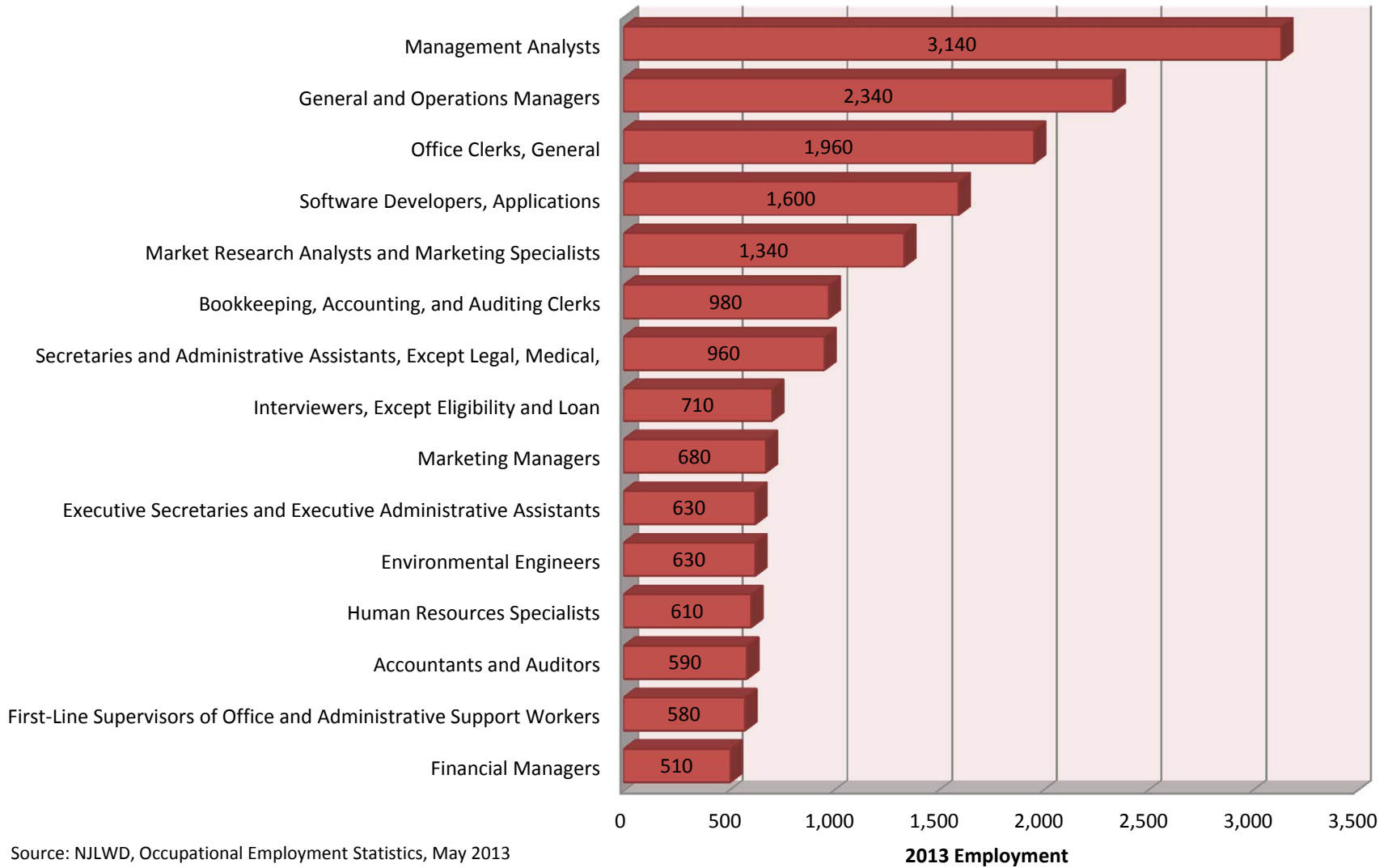
DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

## Business and Financial Operations & Administrative Support Occupations are dominant in the Management, Scientific and Technical Consulting Services industry

<b>Management, Scientific, and Technical Consulting Services: Top Occupations</b>			
<b>Occupational Title</b>	<b>2013 Employment</b>	<b>2013 Average Salary</b>	<b>Education/Training</b>
<b>Total all Cluster Occupations</b>	355,740	\$78,073	
<b>Total all Industry Occupations</b>	39,840	\$75,815	
Management Analysts	3,140	\$114,342	Bachelor's degree
General and Operations Managers	2,340	\$175,186	Associate's degree
Office Clerks, General	1,960	\$32,176	High school diploma or equivalent
Software Developers, Applications	1,600	\$94,230	Bachelor's degree
Market Research Analysts and Marketing Specialists	1,340	\$67,468	Bachelor's degree
Bookkeeping, Accounting, and Auditing Clerks	980	\$42,456	High school diploma or equivalent
Secretaries and Administrative Assistants, Except Legal, Medical,	960	\$35,532	High school diploma or equivalent
Interviewers, Except Eligibility and Loan	710	\$30,772	High school diploma or equivalent
Marketing Managers	680	\$148,910	Bachelor's degree
Environmental Engineers	630	\$78,738	Bachelor's degree
Executive Secretaries and Executive Administrative Assistants	630	\$62,363	High school diploma or equivalent
Human Resources Specialists	610	\$83,138	Bachelor's degree
Accountants and Auditors	590	\$89,031	Bachelor's degree
Supervisors of Office and Administrative Support Workers	580	\$58,012	High school diploma or equivalent
Financial Managers	510	\$144,137	Bachelor's degree



### Largest Occupations in Management, Scientific and Technical Consulting Services

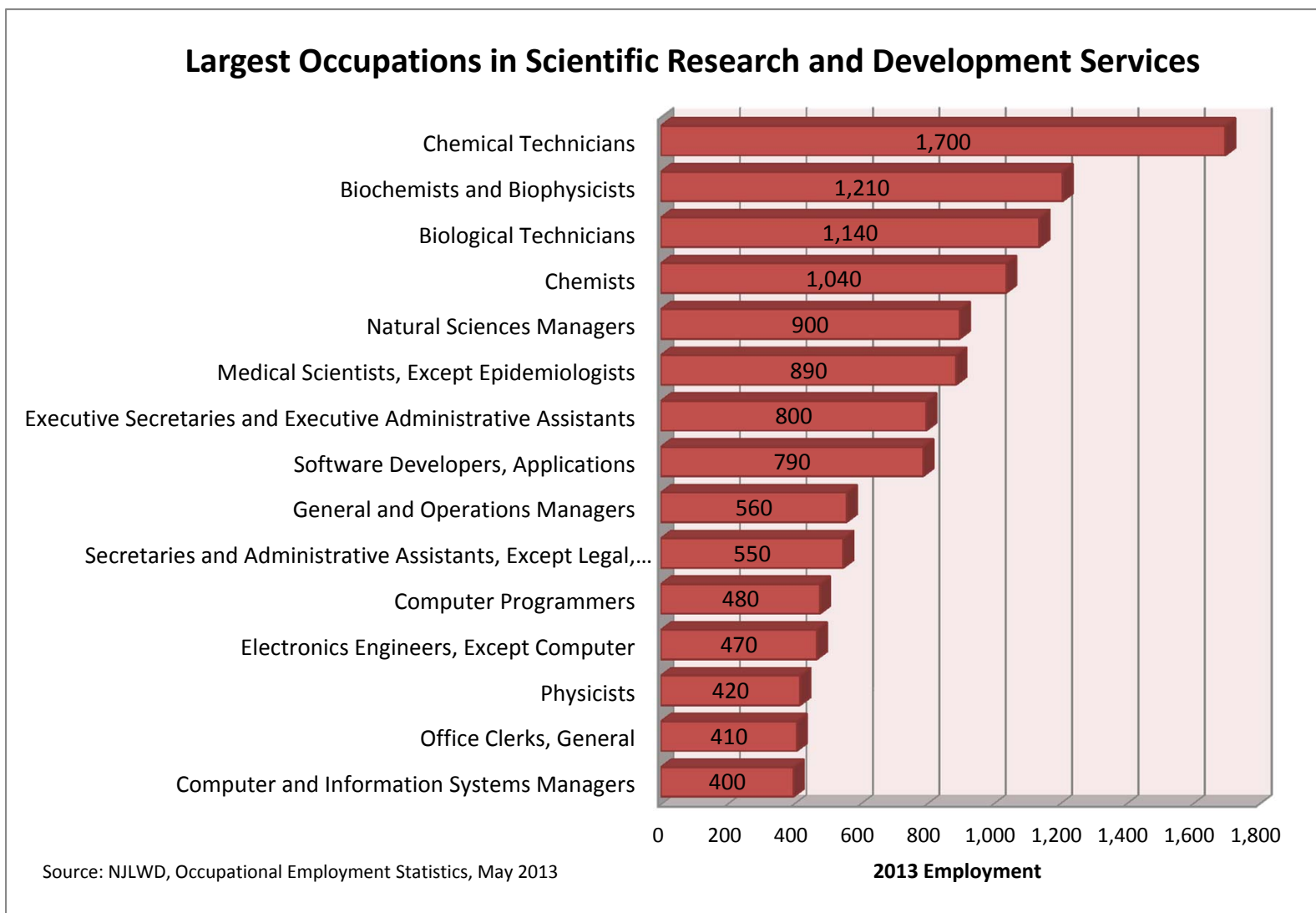


Life, Physical, and Social Science occupations accounted for 28.5 percent of the industry total (2013).

<b>Scientific Research and Development Services: Top Occupations</b>			
<b>Occupational Title</b>	<b>2013 Employment</b>	<b>2013 Average Salary</b>	<b>Education/Training</b>
<b>Total all Cluster Occupations</b>	355,740	\$78,073	
<b>Total all Industry Occupations</b>	28,460	\$96,177	
Chemical Technicians	1,700	\$70,000	Associate's degree
Biochemists and Biophysicists	1,210	\$104,606	Doctoral or professional degree
Biological Technicians	1,140	\$58,192	Bachelor's degree
Chemists	1,040	\$96,685	Bachelor's degree
Natural Sciences Managers	900	\$180,129	Bachelor's degree
Medical Scientists, Except Epidemiologists	890	\$107,506	Doctoral or professional degree
Executive Secretaries and Executive Administrative Assistants	800	\$63,372	High school diploma or equivalent
Software Developers, Applications	790	\$107,177	Bachelor's degree
General and Operations Managers	560	\$207,847	Associate's degree
Secretaries and Administrative Assistants, Except Legal, Medical,	550	\$47,005	High school diploma or equivalent
Computer Programmers	480	\$86,484	Bachelor's degree
Electronics Engineers, Except Computer	470	\$117,387	Bachelor's degree
Physicists	420	\$107,188	Doctoral or professional degree
Office Clerks, General	410	\$39,343	High school diploma or equivalent
Computer and Information Systems Managers	400	\$161,511	Bachelor's degree

Source: NJLWD, Occupational Employment Statistics, May 2013

The top ten occupations were responsible for 33.7 percent of occupational employment within the industry in 2013.



# Technology Industry Cluster:

Demographic Overview

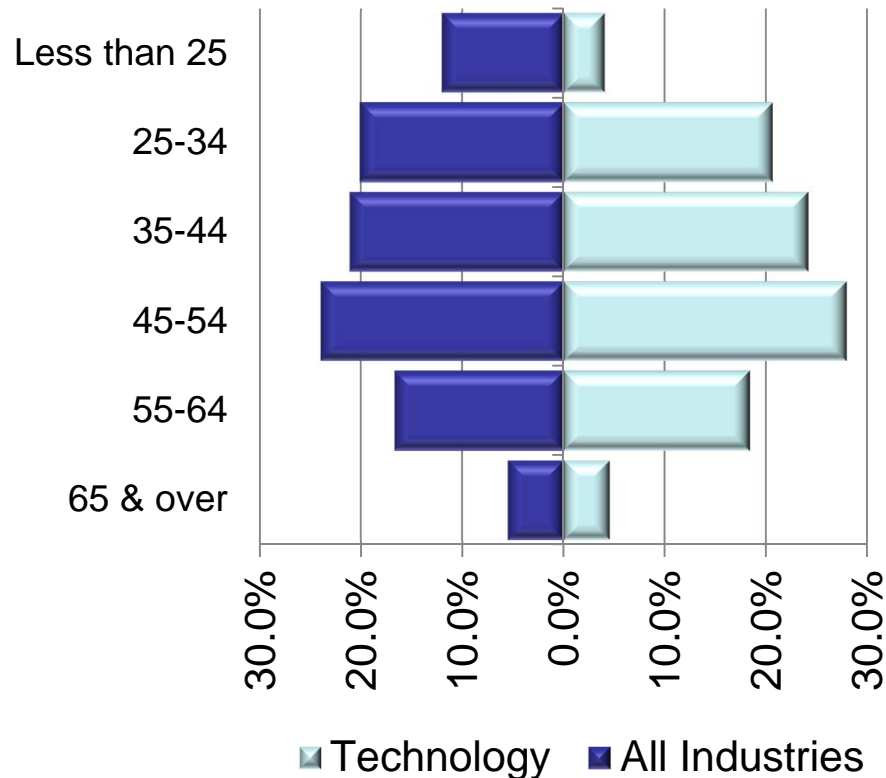
Traditional Labor Market  
Information View

Winter 2014 – 2015



## Comparison by age group of the technology cluster and total nonfarm employment (NJ residents)

**Age Breakdown of Workers in Technology and All Industries  
New Jersey, 2013**



The workforce of the technology industry is older than average with about 51 percent aged 45 and up compared to only 46 percent overall

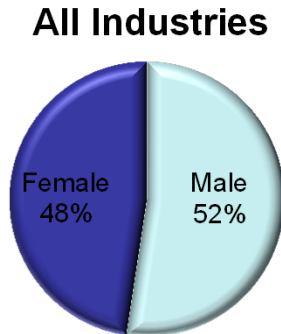
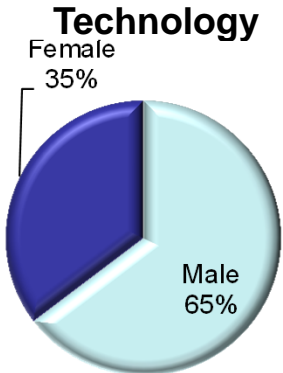
The largest disparity among age cohorts occurs in the youngest group, where only 4 percent of the technology workforce is 25 years old or younger

Roughly 5 percent of the current NJ resident technology workforce is aged 65 and older

Source: U.S. Census Bureau, 2013 American Community Survey  
Prepared by: New Jersey Department of Labor and Workforce Development  
November, 2014

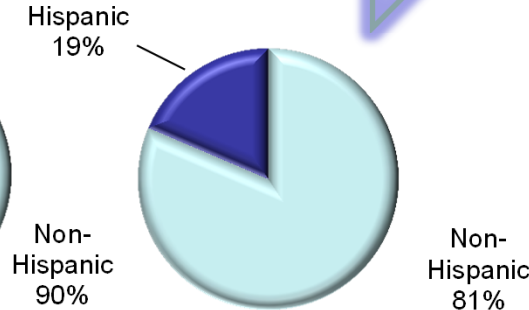
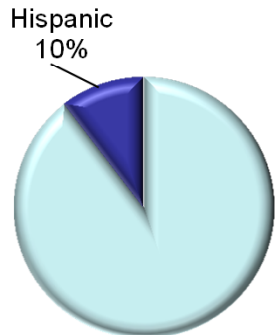
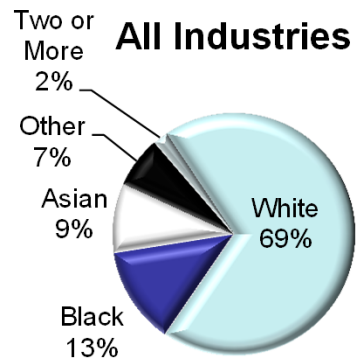
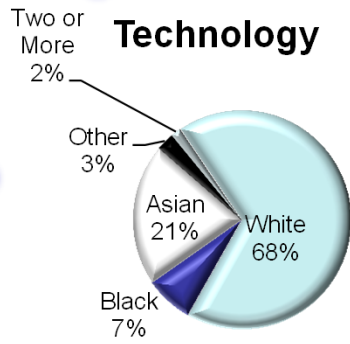


# Gender, racial, and ethnic profile of New Jersey residents within the technology work force



Males outnumber Females by nearly a 2 to 1 margin in the technology workforce

The technology workforce has a greater proportion of NJ residents who are Asian (21%).

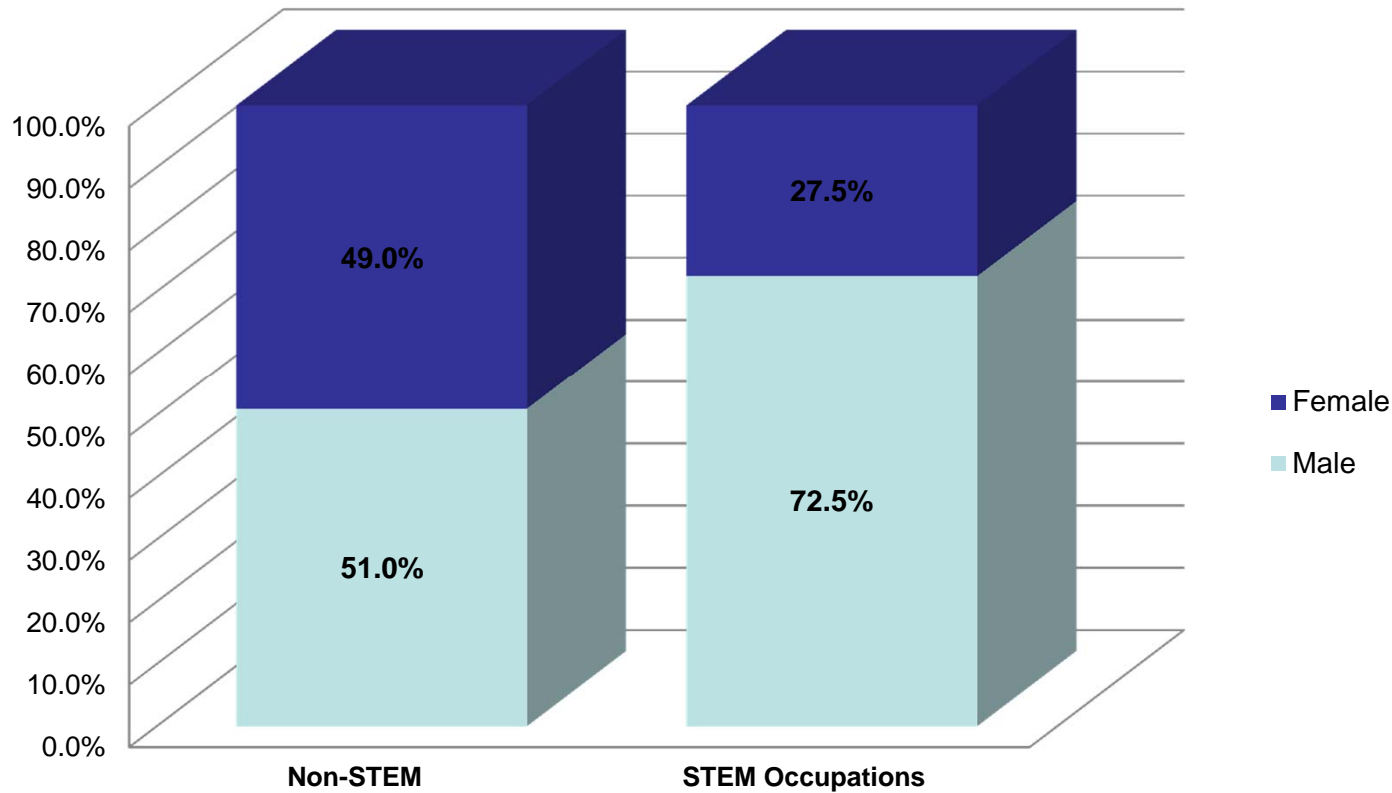


The workforce has fewer Hispanics than average



# Resident women hold only twenty-seven percent of Science, Technology, Engineering & Math jobs in New Jersey

## Gender Shares of Non-Stem and STEM Jobs, 2013



Source: 2013 American Community Survey public-use micro data

Note: Estimates are for employed persons 16 and over



STATE OF NEW JERSEY

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

# Women comprise 53 percent of the physical and life science resident workforce

## *Employment in STEM Occupations in 2013: New Jersey*

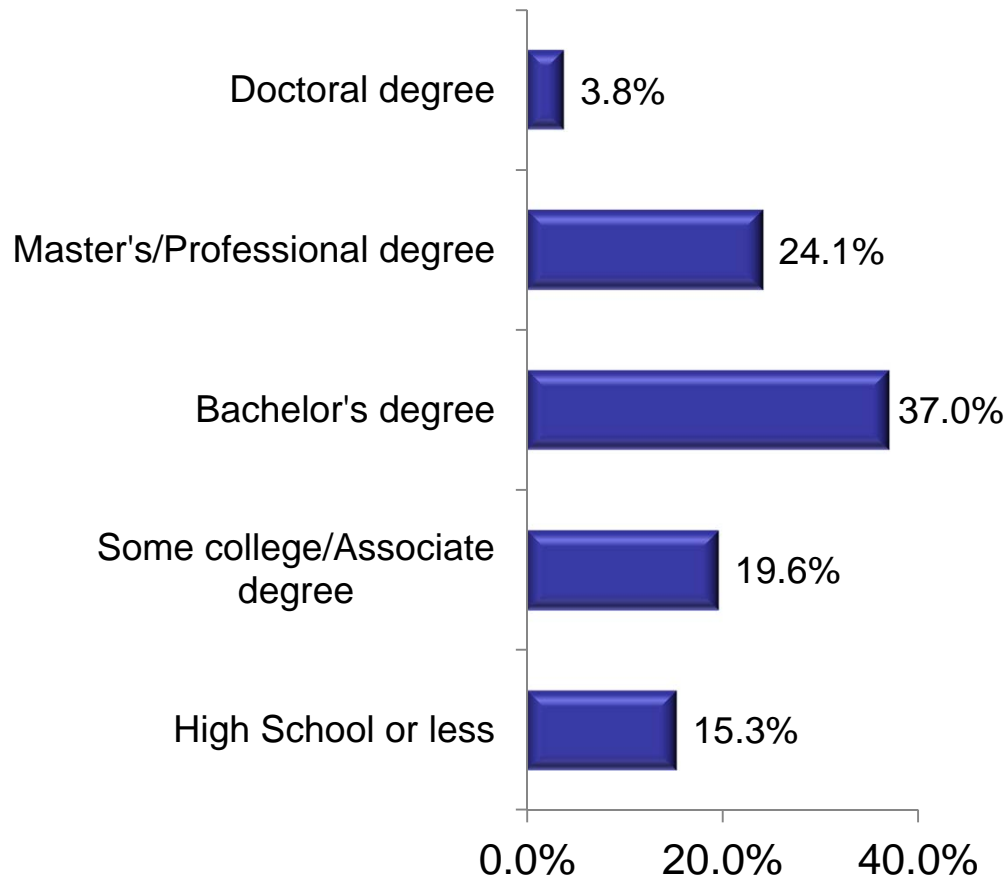
	Total	Male		Female	
		Number	Percent	Number	Percent
<i>STEM total</i>	303,094	219,703	72.5%	83,391	27.5%
Computer Science and Math	163,364	120,914	74.0%	42,450	26.0%
Engineering & Surveying	65,250	55,256	84.7%	9,994	15.3%
Physical & Life Science	43,017	20,150	46.8%	22,867	53.2%
STEM Managerial	31,463	23,383	74.3%	8,080	25.7%

Source: 2013 American Community Survey (ACS) Public Use Microdata Samples (PUMS).

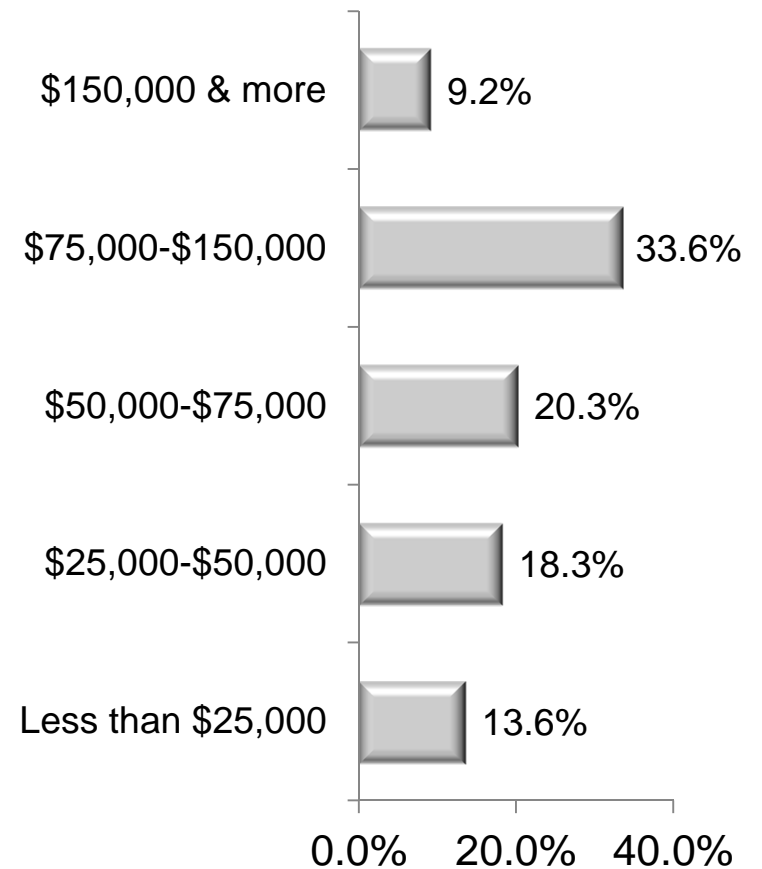


# Employment status and personal earnings of NJ residents in the technology industry

## Education Level



## Personal Earnings



Source: U.S. Census Bureau, 2013 American Community Survey  
Prepared by: New Jersey Department of Labor and Workforce Development  
November, 2014



# Technology Industry Cluster:

## Occupational Projections and Outlook

### Traditional Labor Market Information View

Winter 2014 – 2015



# STEM occupations are projected to grow at a faster rate than Non-STEM occupations

(Including non-technology industry sectors)

State of New Jersey

Estimated and Projected Employment by Detailed Occupation: 2012-2022

Occupational Title	Employment				Average Annual Job Openings		
	Actual 2012	Projected 2022	Change 2012-2022		Total	Growth	Replacement
			Number	Percent			
<b>Total, All Occupations</b>	<b>4,149,400</b>	<b>4,462,550</b>	<b>313,150</b>	<b>7.5</b>	<b>131,470</b>	<b>34,560</b>	<b>96,910</b>
<b>STEM Occupations</b>	<b>250,850</b>	<b>281,800</b>	<b>30,950</b>	<b>12.3</b>	<b>7,980</b>	<b>3,090</b>	<b>4,880</b>
<b>Non-STEM Occupations</b>	<b>3,898,550</b>	<b>4,180,750</b>	<b>282,200</b>	<b>7.2</b>	<b>123,490</b>	<b>31,470</b>	<b>92,030</b>
STEM Management	22,600	25,400	2,800	12.4	670	280	380
Computer and Math occupations	128,550	149,800	21,250	16.5	4,200	2,120	2,100
Engineering and Surveying occupations	50,300	54,100	3,800	7.6	1,590	370	1,200
Physical and Life Sciences occupations	30,000	31,750	1,750	5.8	1,030	190	840
Education, Training and Library Occupations	4,750	5,100	350	7.4	110	30	80
Sales and Related Occupations	14,650	15,650	1,000	6.8	380	100	280

Note: STEM Occupations were revised to reflect the SOC Policy Committee recommendation to the Office of Management and Budget.

Source: NJLWD Current Employment Statistics, Occupational Employment Statistics



## Estimated and Projected Employment for STEM Detailed Occupations: 2012-2022 (Including non-technology industry sectors)

SOC	Occupation	Employment		Change 2012-2022		Average Annual Job Openings		
		2012 Actual	2022 Projected	Number	Percent	Total	Growth	Replacement
<b>00-0000</b>	<b>Total, All Occupations</b>	<b>4,149,400</b>	<b>4,462,550</b>	<b>313,150</b>	<b>7.5</b>	<b>131,470</b>	<b>34,560</b>	<b>96,910</b>
	<b>STEM Occupations</b>	<b>250,850</b>	<b>281,800</b>	<b>30,950</b>	<b>12.3</b>	<b>7,980</b>	<b>3,090</b>	<b>4,880</b>
	<b>Non-STEM Occupations</b>	<b>3,898,550</b>	<b>4,180,750</b>	<b>282,200</b>	<b>7.2</b>	<b>123,490</b>	<b>31,470</b>	<b>92,030</b>
	<b>STEM Management</b>	<b>22,600</b>	<b>25,400</b>	<b>2,800</b>	<b>12.4</b>	<b>670</b>	<b>280</b>	<b>380</b>
11-3021	Computer and Information Systems Managers	14,600	16,750	2,150	14.8	420	220	200
11-9041	Architectural and Engineering Managers	5,000	5,450	450	8.5	170	40	120
11-9121	Natural Sciences Managers	3,000	3,200	200	6.0	80	20	60
	<b>Computer and Math occupations</b>	<b>128,550</b>	<b>149,800</b>	<b>21,250</b>	<b>16.5</b>	<b>4,200</b>	<b>2,120</b>	<b>2,100</b>
15-1111	Computer and Information Research Scientists	750	800	50	6.9	20	10	10
15-1121	Computer Systems Analysts	17,100	21,050	3,950	23.1	660	390	270
15-1122	Information Security Analysts	2,050	2,400	350	16.0	70	30	30
15-1131	Computer Programmers	12,750	13,750	1,000	8.0	430	100	330
15-1132	Software Developers, Applications	29,100	35,750	6,650	23.0	1,040	670	370
15-1133	Software Developers, Systems Software	9,550	11,200	1,650	17.5	290	170	120
15-1134	Web Developers	3,350	3,850	500	14.9	100	50	50
15-1141	Database Administrators	4,150	4,800	650	15.5	140	60	80
15-1142	Network and Computer Systems Administrators	10,400	11,100	700	6.7	230	70	160
15-1143	Computer Network Architects	5,600	6,100	500	8.6	140	50	90
15-1151	Computer User Support Specialists	15,650	18,300	2,650	16.9	510	270	250
15-1152	Computer Network Support Specialists	4,600	4,750	150	3.7	90	20	70
15-1199	Computer Occupations, All Other	9,450	10,700	1,250	13.1	270	120	150
15-2011	Actuaries	1,500	1,900	400	28.2	80	40	40
15-2021	Mathematicians	300	400	100	19.9	10	10	10
15-2031	Operations Research Analysts	1,300	1,750	450	30.8	70	40	30
15-2041	Statisticians	550	700	150	23.0	30	10	20
15-2091	Mathematical Technicians	200	250	50	22.1	10	10	10
15-2099	Mathematical Science Occupations, All Other	200	250	50	13.8	10	0	10



## Estimated and Projected Employment for STEM Detailed Occupations: 2012-2022 (Cont.) (Including non-technology industry sectors)

SOC	Occupation	Employment		Change 2012-2022		Average Annual Job Openings		
		2012 Actual	2022 Projected	Number	Percent	Total	Growth	Replacement
	<b>Engineering and Surveying occupations</b>	<b>50,300</b>	<b>54,100</b>	<b>3,800</b>	<b>7.6</b>	<b>1,590</b>	<b>370</b>	<b>1,200</b>
17-1021	Cartographers and Photogrammetrists	150	200	50	15.2	10	0	0
17-1022	Surveyors	1,050	1,150	100	7.2	30	10	20
17-2011	Aerospace Engineers	1,650	2,000	350	21.8	70	40	40
17-2021	Agricultural Engineers	0	0	0	-33.3	0	0	0
17-2031	Biomedical Engineers	400	500	100	26.0	20	10	10
17-2041	Chemical Engineers	1,400	1,450	50	3.6	40	10	30
17-2051	Civil Engineers	7,100	8,450	1,350	19.1	310	140	170
17-2061	Computer Hardware Engineers	1,050	1,100	50	2.1	30	0	20
17-2071	Electrical Engineers	3,900	4,200	300	8.4	120	30	90
17-2072	Electronics Engineers, Except Computer	3,550	3,700	150	5.1	100	20	80
17-2081	Environmental Engineers	2,250	2,650	400	16.4	90	40	60
17-2111	Health and Safety Engineers, Except Mining Safety	600	650	50	4.1	20	0	20
17-2112	Industrial Engineers	3,300	3,350	50	1.3	100	0	100
17-2121	Marine Engineers and Naval Architects	50	50	0	4.3	0	0	0
17-2131	Materials Engineers	500	450	-50	-0.8	20	0	20
17-2141	Mechanical Engineers	6,200	6,550	350	5.8	250	40	210
17-2151	Mining and Geological Engineers, Including Mining	0	0	0	10.0	0	0	0
17-2161	Nuclear Engineers	400	450	50	14.9	20	10	10
17-2171	Petroleum Engineers	200	200	0	3.4	10	0	10
17-2199	Engineers, All Other	4,450	4,500	50	0.6	90	0	80
17-3011	Architectural and Civil Drafters	1,950	1,850	-100	-2.9	30	0	30
17-3012	Electrical and Electronics Drafters	350	400	50	9.9	10	0	10
17-3013	Mechanical Drafters	1,400	1,450	50	2.1	20	0	20
17-3019	Drafters, All Other	500	550	50	9.1	10	0	10
17-3021	Aerospace Engineering and Operations Technicians	200	250	50	21.9	10	0	0
17-3022	Civil Engineering Technicians	1,150	1,200	50	3.2	30	0	20
17-3023	Electrical and Electronics Engineering Technicians	2,800	2,850	50	1.4	60	0	60
17-3024	Electro-Mechanical Technicians	400	450	50	3.1	10	0	10
17-3025	Environmental Engineering Technicians	550	650	100	17.8	20	10	10
17-3026	Industrial Engineering Technicians	450	450	0	-1.4	10	0	10
17-3027	Mechanical Engineering Technicians	900	950	50	3.9	20	0	20
17-3029	Engineering Technicians, Except Drafters, All Other	1,100	1,100	0	-3.4	20	0	20
17-3031	Surveying and Mapping Technicians	500	550	50	13.6	20	10	10



## Estimated and Projected Employment for STEM Detailed Occupations: 2012-2022 (Cont.) (Including non-technology industry sectors)

SOC	Occupation	Employment		Change 2012-2022		Average Annual Job Openings		
		2012 Actual	2022 Projected	Number	Percent	Total	Growth	Replacement
	<b>Physical and Life Sciences occupations</b>	<b>30,000</b>	<b>31,750</b>	<b>1,750</b>	<b>5.8</b>	<b>1,030</b>	<b>190</b>	<b>840</b>
19-1011	Animal Scientists	0	0	0	-6.3	0	0	0
19-1012	Food Scientists and Technologists	550	700	150	29.1	30	20	20
19-1013	Soil and Plant Scientists	100	100	0	3.1	0	0	0
19-1021	Biochemists and Biophysicists	4,000	4,500	500	13.6	170	50	110
19-1022	Microbiologists	500	500	0	7.5	20	0	10
19-1023	Zoologists and Wildlife Biologists	150	150	0	-1.5	0	0	0
19-1029	Biological Scientists, All Other	650	600	-50	-4.1	20	0	20
19-1031	Conservation Scientists	100	100	0	-4.2	0	0	0
19-1032	Foresters	50	50	0	10.3	0	0	0
19-1041	Epidemiologists	100	50	-50	-3.9	0	0	0
19-1042	Medical Scientists, Except Epidemiologists	1,900	2,000	100	5.4	50	10	40
19-1099	Life Scientists, All Other	300	300	0	1.9	10	0	10
19-2012	Physicists	1,000	1,100	100	7.2	30	10	30
19-2021	Atmospheric and Space Scientists	100	100	0	-1.0	0	0	0
19-2031	Chemists	5,800	5,850	50	1.1	160	10	150
19-2032	Materials Scientists	250	300	50	3.4	10	0	10
19-2041	Environmental Scientists and Specialists, Including Health	2,550	2,800	250	9.6	100	30	80
19-2042	Geoscientists, Except Hydrologists and Geographers	600	700	100	16.9	30	10	20
19-2043	Hydrologists	200	200	0	7.6	10	0	10
19-2099	Physical Scientists, All Other	750	750	0	0.8	20	0	20
19-4011	Agricultural and Food Science Technicians	200	200	0	1.5	10	0	10
19-4021	Biological Technicians	2,400	2,600	200	7.0	90	20	70
19-4031	Chemical Technicians	4,600	4,700	100	1.9	120	10	110
19-4041	Geological and Petroleum Technicians	50	50	0	15.0	0	0	0
19-4051	Nuclear Technicians	100	100	0	24.2	10	0	0
19-4091	Environmental Science and Protection Technicians, Including Health	900	1,050	150	15.5	50	10	40
19-4092	Forensic Science Technicians	100	100	0	-3.2	0	0	0
19-4093	Forest and Conservation Technicians	100	100	0	0.0	0	0	0
19-4099	Life, Physical, and Social Science Technicians, All Other	1,900	2,000	100	6.2	90	10	80



## Estimated and Projected Employment for STEM Detailed Occupations: 2012-2022 (Cont.) (Including non-technology industry sectors)

SOC	Occupation	Employment		Change 2012-2022		Average Annual Job Openings		
		2012 Actual	2022 Projected	Number	Percent	Total	Growth	Replacement
	<b>Education, Training and Library Occupations</b>	<b>4,750</b>	<b>5,100</b>	<b>350</b>	<b>7.4</b>	<b>110</b>	<b>30</b>	<b>80</b>
25-1021	Computer Science Teachers, Postsecondary	1,000	1,050	50	7.3	20	10	20
25-1022	Mathematical Science Teachers, Postsecondary	1,050	1,100	50	6.2	20	10	20
25-1032	Engineering Teachers, Postsecondary	400	400	0	6.4	10	0	10
25-1041	Agricultural Sciences Teachers, Postsecondary	100	100	0	2.9	0	0	0
25-1042	Biological Science Teachers, Postsecondary	1,100	1,250	150	13.1	30	10	20
25-1043	Forestry and Conservation Science Teachers, Postsecondary	0	0	0	0.0	0	0	0
25-1051	Atmospheric, Earth, Marine, and Space Sciences Teachers, Postsecondary	100	150	50	6.5	0	0	0
25-1052	Chemistry Teachers, Postsecondary	500	550	50	8.2	10	0	10
25-1053	Environmental Science Teachers, Postsecondary	200	200	0	7.9	10	0	0
25-1054	Physics Teachers, Postsecondary	300	300	0	8.1	10	0	0
	<b>Sales and Related Occupations</b>	<b>14,650</b>	<b>15,650</b>	<b>1,000</b>	<b>6.8</b>	<b>380</b>	<b>100</b>	<b>280</b>
41-4011	Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	12,250	13,150	900	7.1	330	90	240
41-9031	Sales Engineers	2,400	2,500	100	4.3	50	10	40

Note: STEM Occupations were revised to reflect the SOC Policy Committee recommendation to the Office of Management and Budget.  
Source: NJLWD Current Employment Statistics, Occupational Employment Statistics

# Technology Outlook

As technology based industries and occupations continue to evolve New Jersey will remain in a strong position nationally. The state's highly educated workforce is well documented and it includes nearly 303,000 New Jersey residents in science, technology, engineering and mathematics occupations (U.S. Census Bureau, 2013 American Community Survey). The state's nationally recognized universities such as Stevens Institute of Technology, New Jersey Institute of Technology, and Rutgers – The State University of New Jersey continue to supply qualified applicants to the industry. In addition the many current and future technological advances statewide in key industry sectors, including health care, finance and pharmaceuticals particularly in the growing biotech component, all provide continued opportunities for stability and growth in the industry and for a positive outlook in the state.



# Technology Industry Resources

- [NLWD Labor Market Information Industry Industry Study - Technology](#)
- [Technology & Entrepreneurship Talent Network](#)
- [New Jersey Technology Council](#)
- [Einstein's Alley](#)
- [New Jersey Economic Development Authority](#)
  - [Technology & Life Sciences Support](#)
    - [Edison Innovation Fund](#)
    - [Tech Launch](#)
- New Jersey Business Portal
  - [Technology & Life Sciences](#)



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