

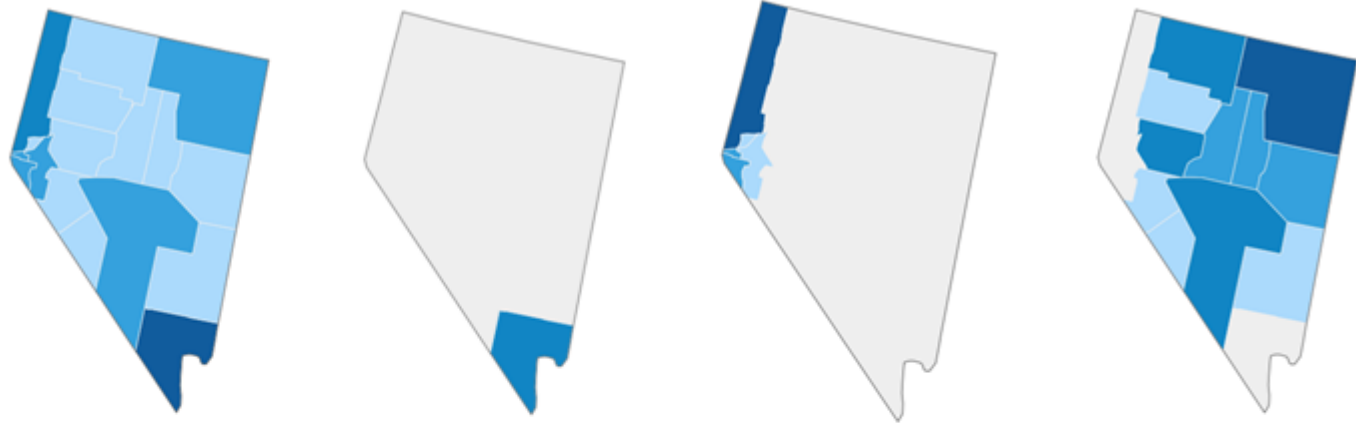
Using Data and Information to Align Economic and Workforce Development



Nevada Governor's Office of
ECONOMIC DEVELOPMENT

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Economy Overview



Population (2016)	2,909,538	2,129,373	606,832	173,334
Jobs (2016)	1,386,245	1,013,372	294,956	71,468
Average Earnings (2016)	\$53,597	\$52,550	\$54,319	\$61,836
Unemployed (2/2016)	86,629	64,262	17,533	4,834
Completions (2014)	25,099	16,313	8,082	704
GRP (2014)	\$134,554,708,313	\$94,435,612,099	\$28,344,616,638	\$11,774,479,576
Exports (2014)	\$156,833,458,609	\$102,645,613,065	\$37,667,782,218	\$18,343,958,828
Imports (2014)	\$139,356,650,691	\$96,577,241,147	\$35,041,389,235	\$14,714,555,510

What is Economic Development?

“The process where both the public and private sector work together to set up an environment where the economic capacity, quality of life and overall well-being improves.”

- Growing regional wealth and well-being
 - The flow of money
- Regional Economies
 - Commuting patterns
 - Comparative advantage
- Target sectors and diversification

Nevada's Economic Development Sectors

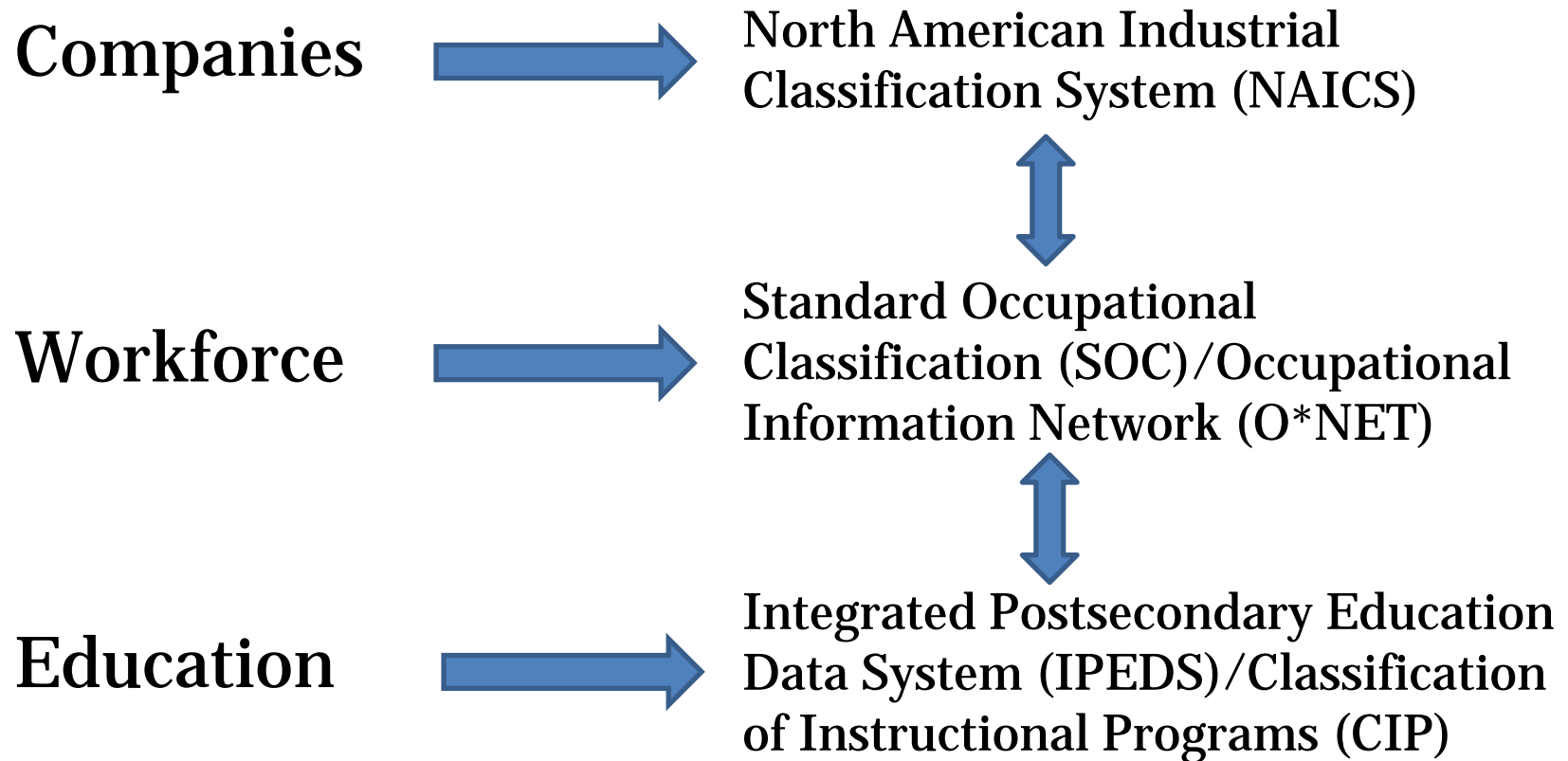
Sector	Number of Jobs	Percent of All Nevada Jobs	Average Annual Wage*	Location Quotient	Percent above or below National	Jobs Multiplier
					Concentration	
Aerospace & Defense	13,297	1.0%	\$95,431	0.66	-34%	2.04
Business Information Technology Ecosystems	62,682	4.5%	\$54,905	0.69	-31%	2.11
Health & Medical Services	109,683	7.9%	\$64,811	0.67	-33%	1.81
Natural Resources	51,927	3.7%	\$73,587	0.60	-40%	2.69
Manufacturing and Logistics	120,663	8.7%	\$68,311	0.59	-41%	2.68
Manufacturing	43,792	3.2%	\$70,702	0.40	-60%	2.85
Mining	14,105	1.0%	\$106,908	2.33	133%	2.29
Tourism, Gaming, & Entertainment	418,338	30.2%	\$36,702	2.41	141%	1.82

*The average earnings per worker in the region. Includes wages, salaries, supplements (additional employee benefits), and proprietor income.

Strategic Location Drivers

- Availability of a Qualified Workforce
- Competitive Cost Environment
 - Labor, Utilities, Real Estate, Transportation, Taxes
- Favorable Logistics/Accessibility
 - Air, Highway, Rail, Port
- Favorable Business Environment
 - Taxes, Incentives, Permitting
- Quality of place
 - Ability to recruit/relocate key workforce

The Economic and Workforce Information and Data Pipeline



Tying Economic and Workforce Development Together

Identifying high demand occupations

- Target Sector approach
- Abatement and Incentive Contracts
- Sector Council Survey
- Burning Glass Technologies
- DETR Occupational Employment Projections

Combined High Demand Occupation Analysis: 3-Digit SOC

SOC 3-digit	Description	GOED Sector Summary	GOED Contracts	Sector Council Survey	Burning Glass	DETR Occupation Projections	Consensus Rank
13-1000	Business Operations Specialists	14	1	7	6	17	1
15-1000	Computer Occupations	12	6	8	2	27	2
29-1000	Health Diagnosing and Treating Practitioners	4	22	9	1	19	2
49-9000	Other Installation, Maintenance, and Repair Occupations	9	8	18	14	12	4
11-9000	Other Management Occupations	35	12	1	4	13	5
43-4000	Information and Record Clerks	31	4	20	8	7	6
51-9000	Other Production Occupations	3	3	15	33	31	7
29-2000	Health Technologists and Technicians	11	18	19	16	25	8
17-2000	Engineers	2	7	3	36	46	9
11-1000	Top Executives	13	15	24	23	20	10
13-2000	Financial Specialists	23	26	22	11	23	11
47-2000	Construction Trades Workers	8	39	29	43	3	12
43-5000	Material Recording, Scheduling, Dispatching, and Distributing Workers	41	2	53	22	10	13
17-3000	Drafters, Engineering Technicians, and Mapping Technicians	21	15	6	43	52	14
53-7000	Material Moving Workers	20	13	76	20	8	14
51-4000	Metal Workers and Plastic Workers	1	17	36	43	43	16
51-2000	Assemblers and Fabricators	16	20	32	43	37	17
43-9000	Other Office and Administrative Support Workers	39	37	30	31	11	17
41-2000	Retail Sales Workers	71	23	55	3	2	19
39-9000	Other Personal Care and Service Workers	50	30	26	28	22	20

Consensus Top 20 High Demand Occupations: 3-Digit SOC

Occupation Group	Consensus Rank	Jobs	Average Wage	LQ
Business Operations Specialists	1	29,059	\$27.13	0.71
Computer Occupations	2	18,240	\$33.26	0.53
Health Diagnosing and Treating Practitioners	3	35,468	\$47.74	0.79
Other Installation, Maintenance, and Repair Occupations	4	28,209	\$22.20	1.07
Other Management Occupations	5	27,428	\$32.67	0.94
Information and Record Clerks	6	52,230	\$14.78	1.05
Other Production Occupations	7	11,573	\$15.99	0.52
Health Technologists and Technicians	8	18,083	\$24.73	0.70
Engineers	9	6,597	\$40.14	0.46
Top Executives	10	20,349	\$42.10	0.94
Financial Specialists	11	19,233	\$27.08	0.77
Construction Trades Workers	12	50,281	\$20.69	1.06
Material Recording, Scheduling, Dispatching, and Distributing Workers	13	37,547	\$14.97	1.10
Drafters, Engineering Technicians, and Mapping Technicians	14	4,778	\$27.19	0.77
Material Moving Workers	15	36,848	\$13.04	0.92
Metal Workers and Plastic Workers	16	6,797	\$17.04	0.39
Other Office and Administrative Support Workers	17	42,201	\$14.47	1.09
Assemblers and Fabricators	18	7,624	\$12.42	0.47
Retail Sales Workers	19	91,009	\$10.79	1.19
Other Personal Care and Service Workers	20	25,738	\$10.62	0.77

At Least

Bachelor's degree
Associate's degree/Postsecondary non-degree award
High school diploma/Postsecondary non-degree award with OJT
High school diploma/Less than high school with OJT

Location Quotient

Above National Concentration:

LQ > 1

Below National Concentration:

LQ .75 to 1

Well Below National Concentration:

LQ < .75

Consensus Top 20 High Demand Occupations: 3-Digit SOC

Occupation Group	Consensus Rank	Jobs	Equivalent U.S. Employment	LQ Job Gap
Business Operations Specialists	1	29,059	40,879	11,820
Computer Occupations	2	18,240	34,702	16,462
Health Diagnosing and Treating Practitioners	3	35,468	44,749	9,281
Other Installation, Maintenance, and Repair Occupations	4	28,209	26,426	(1,783)
Other Management Occupations	5	27,428	29,067	1,639
Information and Record Clerks	6	52,230	49,704	(2,526)
Other Production Occupations	7	11,573	22,254	10,680
Health Technologists and Technicians	8	18,083	25,717	7,634
Engineers	9	6,597	14,334	7,736
Top Executives	10	20,349	21,698	1,348
Financial Specialists	11	19,233	24,976	5,743
Construction Trades Workers	12	50,281	47,216	(3,065)
Material Recording, Scheduling, Dispatching, and Distributing Workers	13	37,547	34,260	(3,286)
Drafters, Engineering Technicians, and Mapping Technicians	14	4,778	6,175	1,397
Material Moving Workers	15	36,848	39,876	3,029
Metal Workers and Plastic Workers	16	6,797	17,275	10,477
Other Office and Administrative Support Workers	17	42,201	38,888	(3,313)
Assemblers and Fabricators	18	7,624	16,207	8,583
Retail Sales Workers	19	91,009	76,441	(14,568)
Other Personal Care and Service Workers	20	25,738	33,568	7,831

At Least

Bachelor's degree
Associate's degree/Postsecondary non-degree award
High school diploma/Postsecondary non-degree award with OJT
High school diploma/Less than high school with OJT

Location Quotient

Above National Concentration: LQ > 1
Below National Concentration: LQ .75 to 1
Well Below National Concentration: LQ < .75

Updating the Model

- Regionalizing the data
- Detailed occupation analysis
- Series weighting

Tying Economic and Workforce Development Together

Identifying high demand occupations

- Target Sector approach
- ~~Abatement and Incentive Contracts~~
- ~~Sector Council Survey~~
- Burning Glass Technologies
- DETR Occupational Employment Projections
- **Brookings STEM Score**
- **Job Openings**

Old and New Statewide Ranking

Occupation Description	Old Rank	New Rank
Business Operations Specialists	1	8
Computer Occupations	2	9
Health Diagnosing and Treating Practitioners	2	1
Other Installation, Maintenance, and Repair Occupations	4	5
Other Management Occupations	5	10
Information and Record Clerks	6	13
Other Production Occupations	7	3
Health Technologists and Technicians	8	2
Engineers	9	7
Top Executives	→ 10	68
Financial Specialists	11	17
Construction Trades Workers	→ 12	4
Material Recording, Scheduling, Dispatching, and Distributing Workers	13	22
Material Moving Workers	14	12
Drafters, Engineering Technicians, and Mapping Technicians	14	16
Metal Workers and Plastic Workers	→ 16	6
Assemblers and Fabricators	17	27
Other Office and Administrative Support Workers	17	28
Retail Sales Workers	→ 19	55
Other Personal Care and Service Workers	→ 20	37
Sales Representatives, Wholesale and Manufacturing	→ 21	71
Operations Specialties Managers	22	21
Life, Physical, and Social Science Technicians	23	26
Counselors, Social Workers, and Other Community and Social Service Specialists	24	11
Secretaries and Administrative Assistants	→ 24	52
Motor Vehicle Operators	→ 26	33
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	27	14
Social Scientists and Related Workers	27	25
Supervisors of Sales Workers	29	74
Art and Design Workers	30	19

New and Old Statewide Ranking

Occupation Description	New Rank	Old Rank
Health Diagnosing and Treating Practitioners	1	2
Health Technologists and Technicians	2	8
Other Production Occupations	3	7
Construction Trades Workers →	4	12
Other Installation, Maintenance, and Repair Occupations	5	4
Metal Workers and Plastic Workers →	6	16
Engineers	7	9
Business Operations Specialists	8	1
Computer Occupations	9	2
Other Management Occupations	10	5
Counselors, Social Workers, and Other Community and Social Service Specialists	11	24
Material Moving Workers	12	14
Information and Record Clerks	13	6
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	14	27
Preschool, Primary, Secondary, and Special Education School Teachers →	15	35
Drafters, Engineering Technicians, and Mapping Technicians	16	14
Financial Specialists	17	11
Life Scientists →	18	35
Art and Design Workers →	19	30
Textile, Apparel, and Furnishings Workers →	20	43
Operations Specialties Managers	21	22
Material Recording, Scheduling, Dispatching, and Distributing Workers	22	13
Electrical and Electronic Equipment Mechanics, Installers, and Repairers →	23	51
Extraction Workers →	24	53
Social Scientists and Related Workers	25	27
Life, Physical, and Social Science Technicians	26	23
Assemblers and Fabricators →	27	17
Other Office and Administrative Support Workers	28	17
Media and Communication Workers →	29	40
Other Healthcare Support Occupations →	30	32

New Statewide to Northern Nevada Ranking

Occupation Description	New State Rank	Northern NV Rank
Health Diagnosing and Treating Practitioners	1	1
Health Technologists and Technicians	2	3
Other Production Occupations →	3	2
Construction Trades Workers	4	4
Other Installation, Maintenance, and Repair Occupations	5	5
Metal Workers and Plastic Workers	6	7
Engineers	7	6
Business Operations Specialists →	8	8
Computer Occupations	9	10
Other Management Occupations	10	9
Counselors, Social Workers, and Other Community and Social Service Specialists	11	11
Material Moving Workers	12	12
Information and Record Clerks	13	13
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	14	16
Preschool, Primary, Secondary, and Special Education School Teachers	15	14
Drafters, Engineering Technicians, and Mapping Technicians →	16	15
Financial Specialists	17	17
Life Scientists	18	20
Art and Design Workers	19	19
Textile, Apparel, and Furnishings Workers →	20	22
Operations Specialties Managers	21	21
Material Recording, Scheduling, Dispatching, and Distributing Workers →	22	18
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	23	23
Extraction Workers	24	24
Social Scientists and Related Workers →	25	33
Life, Physical, and Social Science Technicians	26	29
Assemblers and Fabricators →	27	25
Other Office and Administrative Support Workers	28	26
Media and Communication Workers →	29	31
Other Healthcare Support Occupations	30	28

Northern Nevada to New State Ranking

Occupation Description	Northern NV Rank	New State Rank
Health Diagnosing and Treating Practitioners	1	1
Other Production Occupations	2	3
Health Technologists and Technicians →	3	2
Construction Trades Workers	4	4
Other Installation, Maintenance, and Repair Occupations	5	5
Engineers	6	7
Metal Workers and Plastic Workers	7	6
Business Operations Specialists →	8	8
Other Management Occupations	9	10
Computer Occupations	10	9
Counselors, Social Workers, and Other Community and Social Service Specialists	11	11
Material Moving Workers	12	12
Information and Record Clerks	13	13
Preschool, Primary, Secondary, and Special Education School Teachers	14	15
Drafters, Engineering Technicians, and Mapping Technicians →	15	16
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	16	14
Financial Specialists	17	17
Material Recording, Scheduling, Dispatching, and Distributing Workers →	18	22
Art and Design Workers	19	19
Life Scientists	20	18
Operations Specialties Managers	21	21
Textile, Apparel, and Furnishings Workers	22	20
Electrical and Electronic Equipment Mechanics, Installers, and Repairers	23	23
Extraction Workers	24	24
Assemblers and Fabricators	25	27
Other Office and Administrative Support Workers	26	28
Motor Vehicle Operators →	27	33
Other Healthcare Support Occupations	28	30
Life, Physical, and Social Science Technicians	29	26
Plant and System Operators →	30	34

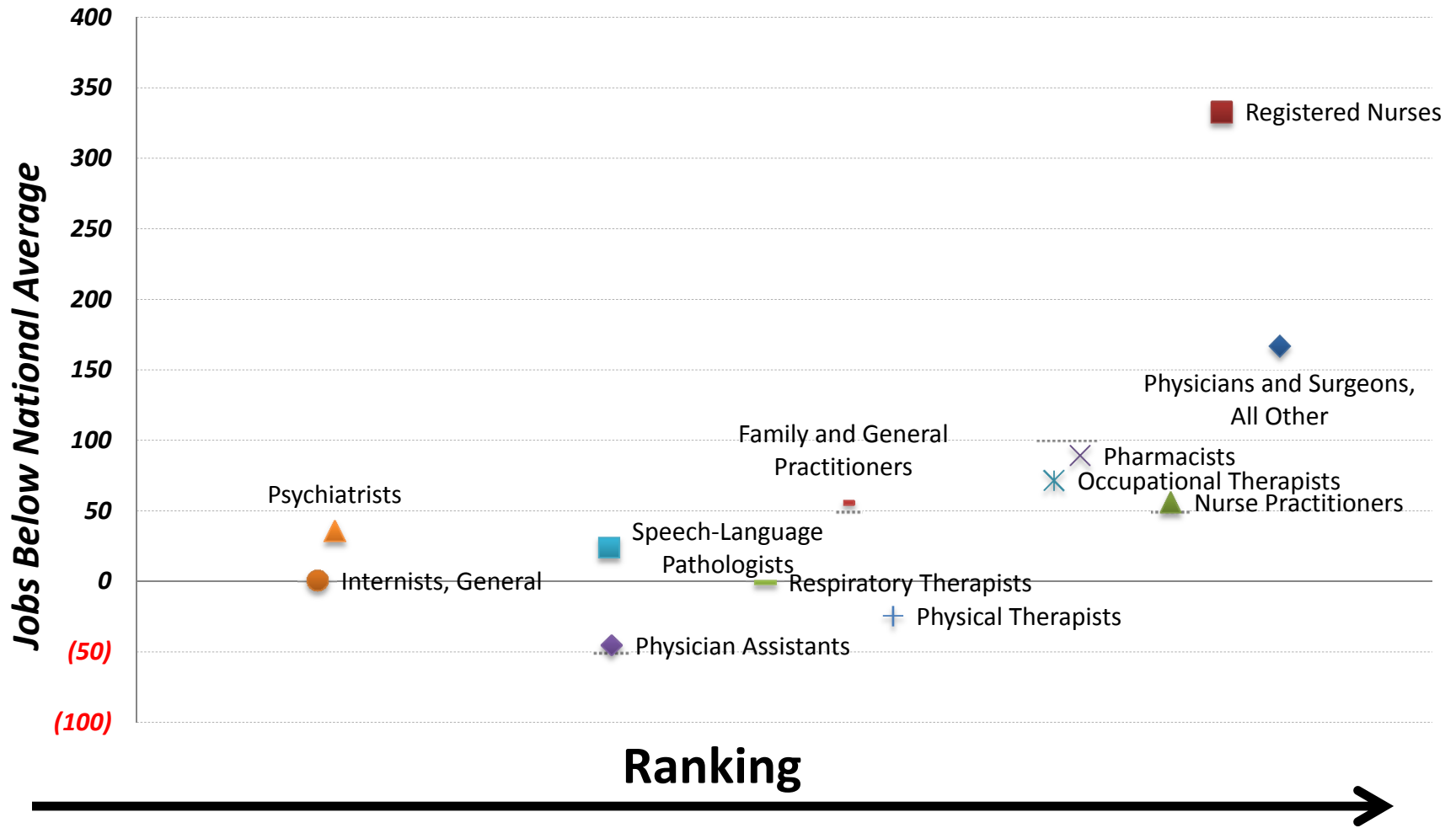
Top 20 High Demand Occupation Groups in Northern Nevada

Typical Entry Level Education/On-The-Job Training

Bachelor's degree
Associate's degree/Postsecondary non-degree award
High school diploma/Postsecondary non-degree award with OJT
High school diploma/Less than high school with OJT

Occupation Group Description	Rank	2016 Jobs	Jobs Above or Below National Average	Avg. Hourly Earnings	
Health Diagnosing and Treating Practitioners	1	9,196	(772)	\$47.24	←
Other Production Occupations	2	3,528	(1,346)	\$16.58	←
Health Technologists and Technicians	3	4,533	(1,173)	\$24.53	←
Construction Trades Workers	4	12,468	2,020	\$20.76	
Other Installation, Maintenance, and Repair Occupations	5	6,221	400	\$20.25	
Engineers	6	2,045	(1,080)	\$40.01	
Metal Workers and Plastic Workers	7	3,245	(410)	\$17.23	
Business Operations Specialists	8	7,747	(1,288)	\$29.43	
Other Management Occupations	9	6,805	357	\$34.58	
Computer Occupations	10	4,888	(2,905)	\$33.88	←
Counselors and Social Workers	11	3,330	(585)	\$23.66	
Material Moving Workers	12	11,690	2,829	\$14.06	
Information and Record Clerks	13	12,454	1,499	\$15.37	
Preschool, Primary, Secondary, and Special Education School Teachers	14	5,895	(1,871)	\$23.57	
Drafters, Engineering Technicians, and Mapping Technicians	15	1,276	(67)	\$24.98	
Vehicle and Mobile Equipment Mechanics, Installers, and Repairers	16	3,839	510	\$20.39	
Financial Specialists	17	4,723	(828)	\$30.19	
Material Recording, Scheduling, Dispatching, and Distributing Workers	18	10,168	2,604	\$15.99	
Art and Design Workers	19	1,541	4	\$17.45	
Life Scientists	20	407	(151)	\$35.19	

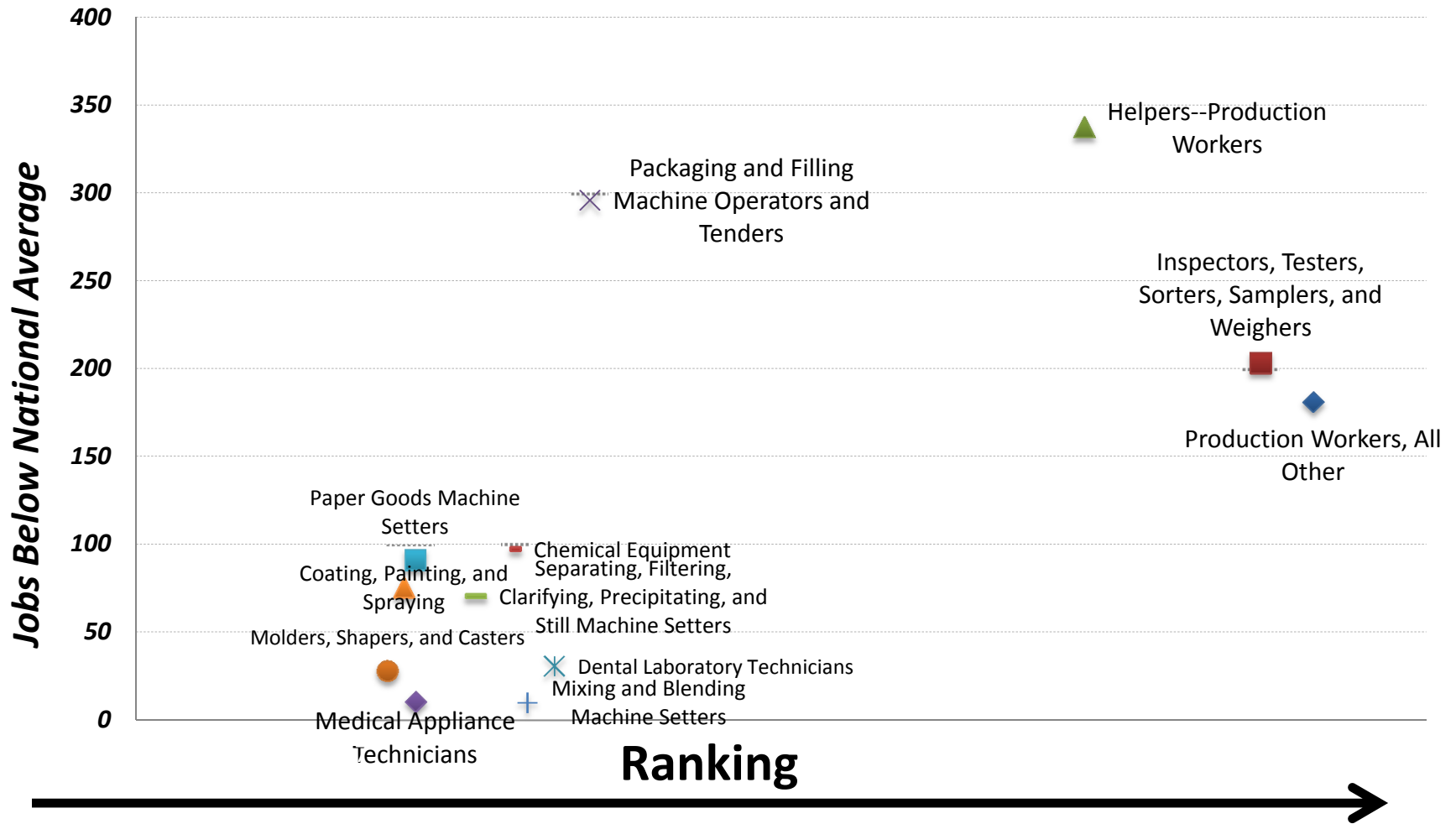
Drilling Down into the Detail: Health Diagnosing and Treating Practitioners



Drilling Down into the Detail: Health Diagnosing and Treating Practitioners

Occupation Description	Rank	Jobs	Avg. Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level of Education	Typical On-The-Job Training
Physicians and Surgeons, All Other	8	498	\$89.24	(167)	Doctoral or professional degree	Internship/residency
Registered Nurses	9	5,017	\$35.96	(333)	Bachelor's degree	None
Nurse Practitioners	13	196	\$48.33	(56)	Master's degree	None
Pharmacists	18	472	\$56.94	(89)	Doctoral or professional degree	None
Occupational Therapists	19	155	\$38.16	(72)	Master's degree	None
Physical Therapists	37	441	\$42.80	25	Doctoral or professional degree	None
Family and General Practitioners	44	209	\$86.51	(56)	Doctoral or professional degree	Internship/residency
Respiratory Therapists	55	235	\$32.47	1	Associate's degree	None
Physician Assistants	71	234	\$45.92	45	Master's degree	None
Speech-Language Pathologists	74	237	\$33.37	(24)	Master's degree	None
Psychiatrists	106	17	\$86.68	(36)	Doctoral or professional degree	Internship/residency
Internists, General	111	101	\$93.26	(1)	Doctoral or professional degree	Internship/residency

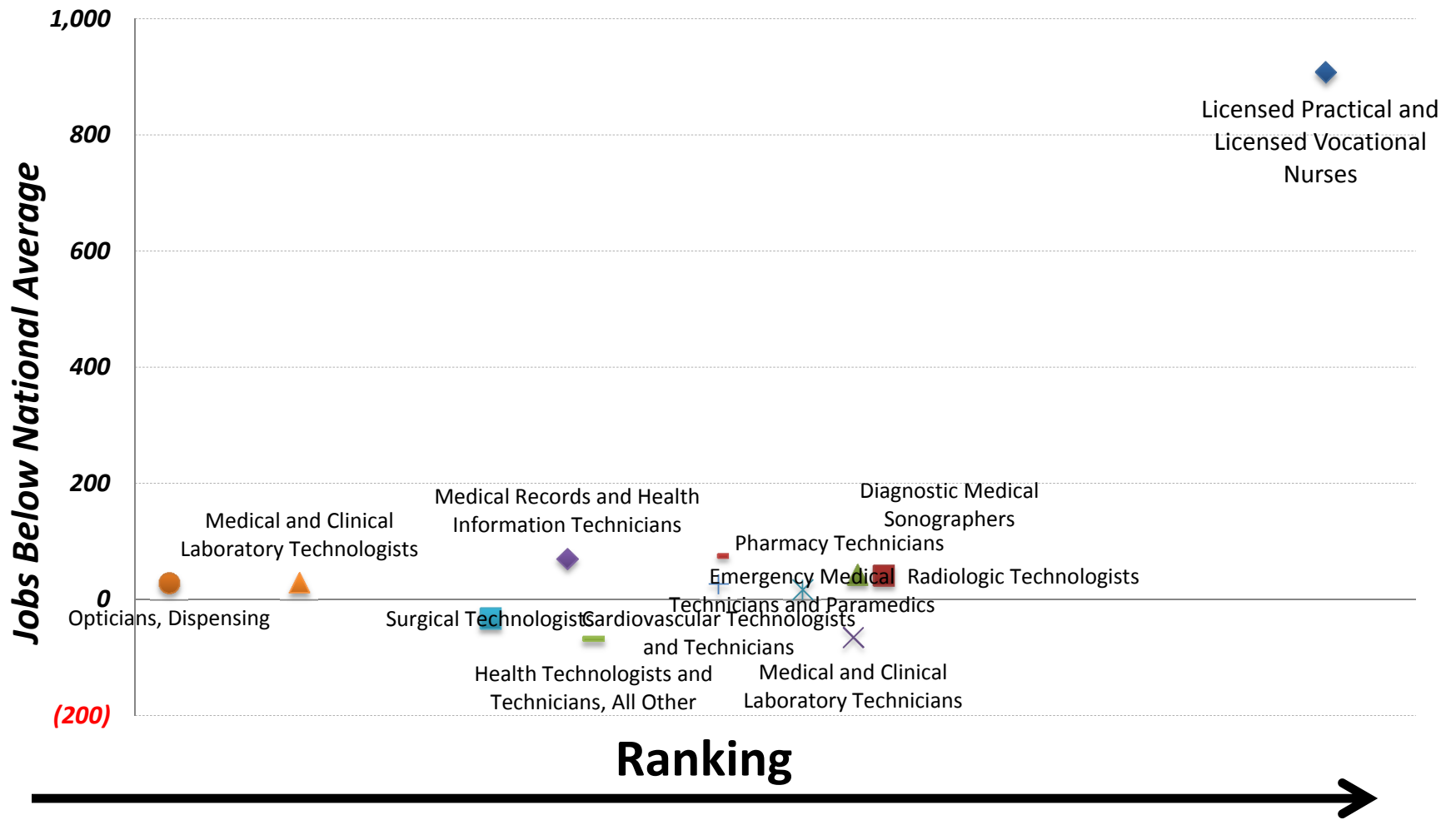
Drilling Down into the Detail: Other Production Occupations



Drilling Down into the Detail: Other Production Occupations

Occupation Description	Rank	2016 Jobs	Avg. Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level of Education	Typical On-The-Job Training
Production Workers, All Other	20	276	\$16.07	(181)	High school diploma or equivalent	Moderate-term on-the-job training
Inspectors, Testers, Sorters, Samplers, and Weighers	28	754	\$18.88	(203)	High school diploma or equivalent	Moderate-term on-the-job training
Helpers--Production Workers	65	461	\$12.54	(338)	No formal educational credential	Short-term on-the-job training
Packaging and Filling Machine Operators and Tenders	183	455	\$15.49	(296)	High school diploma or equivalent	Moderate-term on-the-job training
Dental Laboratory Technicians	195	45	\$22.88	(31)	High school diploma or equivalent	Moderate-term on-the-job training
Mixing and Blending Machine Setters	201	229	\$17.39	(10)	High school diploma or equivalent	Moderate-term on-the-job training
Chemical Equipment Separating, Filtering, Clarifying, Precipitating, and Still Machine	213	27	\$24.80	(97)	High school diploma or equivalent	Moderate-term on-the-job training
	223	17	\$23.54	(70)	High school diploma or equivalent	Moderate-term on-the-job training
Medical Appliance Technicians	254	5	\$23.71	(10)	High school diploma or equivalent	Long-term on-the-job training
Paper Goods Machine Setters	255	82	\$14.09	(91)	High school diploma or equivalent	Moderate-term on-the-job training
Coating, Painting, and Spraying	262	99	\$15.70	(76)	High school diploma or equivalent	Moderate-term on-the-job training
Molders, Shapers, and Casters	271	50	\$17.47	(28)	High school diploma or equivalent	Long-term on-the-job training

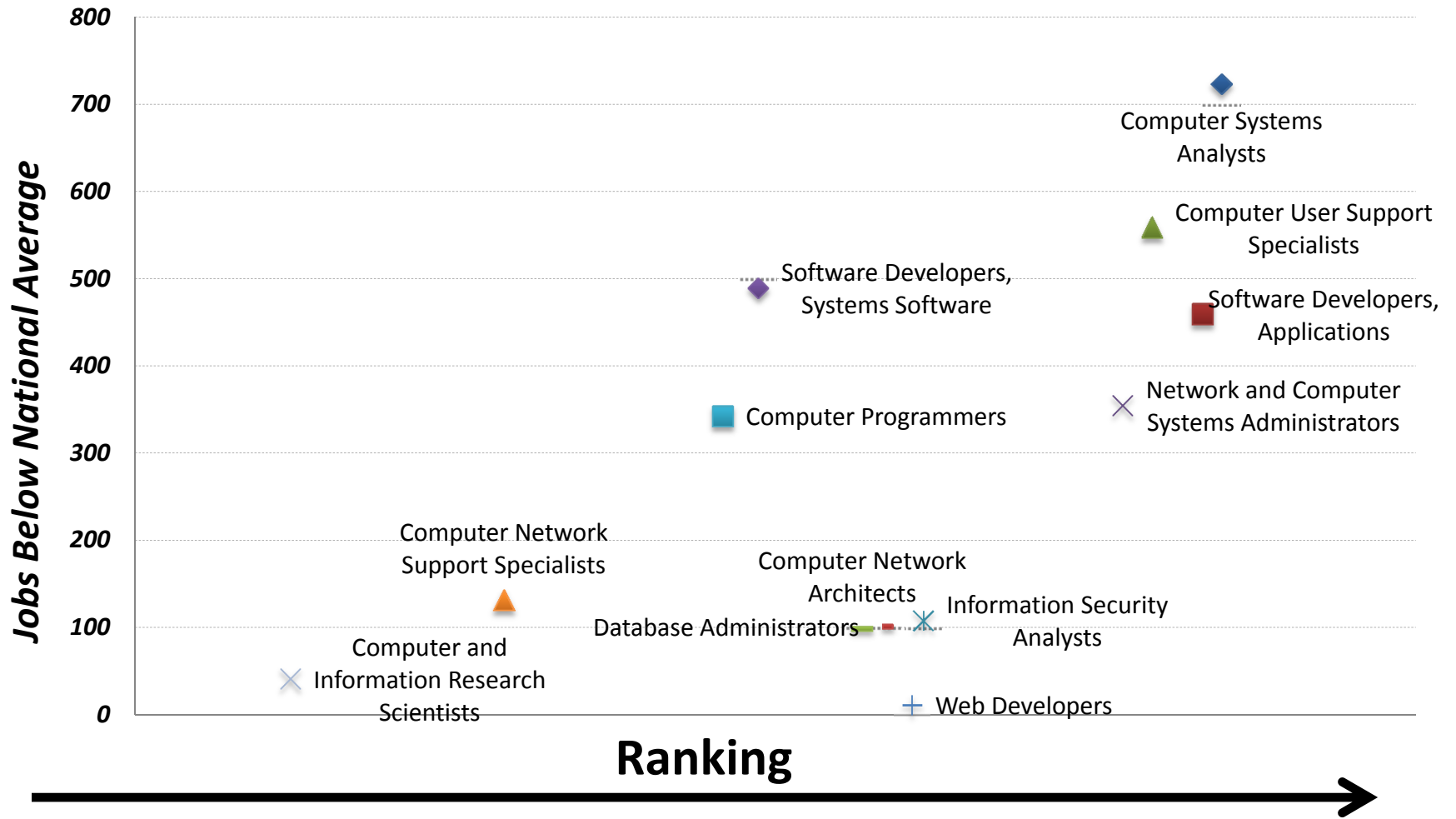
Drilling Down into the Detail: Health Technologists and Technicians



Drilling Down into the Detail: Health Technologists and Technicians

Occupation Description	Rank	2016 Jobs	Avg. Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level of Education	Typical On-The-Job Training
Licensed Practical and Licensed Vocational Nurses	3	485	\$24.32	(908)	Postsecondary nondegree award	None
Radiologic Technologists	42	335	\$30.39	(42)	Associate's degree	None
Diagnostic Medical Sonographers	52	77	\$35.18	(43)	Associate's degree	None
Medical and Clinical Laboratory Technicians	53	380	\$18.87	65	Associate's degree	None
Emergency Medical Technicians and Paramedics	57	442	\$19.96	(17)	Postsecondary nondegree award	None
Cardiovascular Technologists and Technicians	72	75	\$31.58	(27)	Associate's degree	None
Pharmacy Technicians	73	641	\$16.30	(75)	High school diploma or equivalent	Moderate-term on-the-job training
Health Technologists and Technicians, All Other	89	270	\$22.83	68	High school diploma or equivalent	None
Medical Records and Health Information Technicians	97	300	\$19.15	(70)	Postsecondary nondegree award	None
Surgical Technologists	115	229	\$25.52	32	Postsecondary nondegree award	None
Medical and Clinical Laboratory Technologists	144	288	\$31.80	(30)	Bachelor's degree	None
Opticians, Dispensing	180	118	\$21.38	(29)	High school diploma or equivalent	Long-term on-the-job training

Drilling Down into the Detail: Computer Occupations



Drilling Down into the Detail: Computer Occupations

Occupation Description	Rank	2016 Jobs	Avg. Hourly Earnings	Jobs Above or Below National Average	Typical Entry Level of Education	Typical On-The-Job Training
Computer Systems Analysts	1	395	\$33.96	(723)	Bachelor's degree	None
Software Developers, Applications	2	980	\$46.04	(459)	Bachelor's degree	None
Computer User Support Specialists	5	682	\$21.17	(559)	Some college, no degree	None
Network and Computer Systems Administrators	7	373	\$30.78	(355)	Bachelor's degree	None
Information Security Analysts	41	53	\$34.68	(108)	Bachelor's degree	None
Web Developers	50	312	\$24.46	(11)	Associate's degree	None
Database Administrators	56	124	\$35.45	(101)	Bachelor's degree	None
Computer Network Architects	58	182	\$49.41	(98)	Bachelor's degree	None
Software Developers, Systems Software	87	299	\$42.75	(489)	Bachelor's degree	None
Computer Programmers	98	279	\$36.65	(342)	Bachelor's degree	None
Computer Network Support Specialists	167	238	\$27.05	(131)	Associate's degree	None
Computer and Information Research Scientists	297	11	\$53.97	(41)	Doctoral or professional degree	None

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