



Hampton Roads Talent Alignment Strategy

Appendix: Supply-Demand Gap Analysis

June 2019

April 20199



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**Military Exits by
Occupation**

Military Exits by Occupation, 2015

Production Occupation Group	Military Exits in Occupation	Gap
Aerospace Assemblers, Technicians & Mechanics	580	(27)
Auto Mechanics	33	(83)
Heavy Vehicle Mechanics (not Aero)	153	196
General Assemblers and Fabricators	49	898
General Machinist	7	224
Industrial Production Supervisors	7	361
Industrial Machinery Maintenance	50	208
Medical Equipment Repair	2	30
Precision Equipment Repair	366	690
Welders	3	(227)
Not Matched (<i>includes 487 Supervisors of Mechanics, Installers, and Repairers</i>)	537	
TOTAL PRODUCTION OCCUPATIONS	1,787	

Source: Hampton Roads State of the Workforce & Gap Analysis, 2017, EMSI;
Subsequent analysis of data by Avalanche Consulting in 2019



Military Exits by Occupation, 2015

Engineering Occupation Group	Military Exits in Occupation	Gap
Aerospace Engineers	1	55
Architectural and Civil Drafters & Technicians	1	(51)
Atmospheric Scientists & Meteorologists	1	4
Biochemists & Biophysicists	1	6
Cartographers & Surveyors	70	26
Civil Engineers	6	118
Computer Hardware Engineers	2	(109)
Electrical/Electronics Technicians & Drafters	91	195
Electrical & Electronics Repairers	664	87
Facility Operations	12	68
Industrial Engineering Technicians	7	0
Computer Installers & Repairers	20	(55)
Mechanical Engineers	5	(30)
Petroleum & Geological Technicians	230	29
Science Technicians	39	103

Engineering Occupation Group	Military Exits in Occupation	Gap
Surveying & Mapping Technicians	93	15
Telecom Technicians	36	147
Waste Treatment Technicians	14	89
TOTAL ENGINEERING OCCUPATIONS	1,293	

Source: Hampton Roads State of the Workforce & Gap Analysis, 2017, EMSI; Subsequent analysis of data by Avalanche Consulting in 2019

Military Exits by Occupation, 2015

Medical Occupation Group	Military Exits in Occupation	Gap
Cardiovascular Technologists & Technicians	4	1
Dental Assistants	14	33
Dentists & Orthodontists	17	30
Nutritionists	1	(4)
Doctors, Surgeons, & Psychiatrists	247	79
Emergency Medical Technicians & Paramedics	53	31
Licensed Practical & Licensed Vocational Nurses	2	(321)
Medical Assistants	407	(375)
Medical Equipment Specialists	1	(2)
Medical & Clinical Laboratory Technologists	9	51
Medical & Health Services Managers	5	(95)
Medical Records and Health Information Technicians	11	(12)
Nurse Anesthetists	2	14
Nurse Practitioners	1	73

Medical Occupation Group	Military Exits in Occupation	Gap
Occupation Health and Safety Specialists	9	45
Occupational Health and Safety Technicians	1	6
Ophthalmic Medical Technicians	9	93
Pharmacists	1	26
Pharmacy Technicians/Aids	12	(88)
Physical Therapists	1	13
Psychiatric Technicians	8	47
Radiologic/Nuclear Technologists & Therapists	1	0
Registered Nurses	9	(295)
Surgical Technologist	6	21
Veterinarians	1	32
TOTAL MEDICAL OCCUPATIONS	832	

Source: Hampton Roads State of the Workforce & Gap Analysis, 2017, EMSI;
Subsequent analysis of data by Avalanche Consulting in 2019



Military Exits by Occupation, 2015

Info Tech Occupation Group	Military Exits in Occupation	Gap
IT Networks/Systems/Security Admins	438	38
TOTAL INFO TECH OCCUPATIONS	438	

Source: Hampton Roads State of the Workforce & Gap Analysis, 2017, EMSI;
Subsequent analysis of data by Avalanche Consulting in 2019

Business Occupation Group	Military Exits in Occupation	Gap
Accounting Support	8	723
Executives & Management Analysts	23	400
Chief Executives	3	61
Data Processors	27	167
Executive/Admin. Assistants	76	838
Financial Managers & Analysts	6	248
Human Resources Managers	57	560
Human Resources Support	92	146
Buyers & Purchasing Agents	2	232
Purchasing Managers	7	34
Administrative Support Management	70	784
Not Matched	189	-
TOTAL BUSINESS OCCUPATIONS	560	



Military Exits by Occupation, 2015

Transportation & Logistics Occupation Group	Military Exits in Occupation	Gap
Airline Pilots	68	26
Airfield Operations Controllers	10	0
Air Traffic Controllers	55	13
Logistics Clerks	109	553
Commercial Divers & Instructors	16	12
Truck & Commercial Drivers	87	1,971
Packers & Material Movers	43	2,073
Supply Chain Managers & Analysts	60	182
Ship/Marine Engineers	373	357
Transportation & Logistics Managers	38	257
Sailors & Marine Oilers	49	213
Not Matched	296	-
TRANSPORTATION & LOGISTICS OCCUPATIONS	1,204	

Source: Hampton Roads State of the Workforce & Gap Analysis, 2017, EMSI;
Subsequent analysis of data by Avalanche Consulting in 2019

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**Occupational
Profiles by Cluster**

Occupational Profiles – Back Office

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CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-3011	Administrative Services Managers	628	9.3%	370	\$43.56	□ 4%	\$26.19	□ 3%	B
11-3061	Purchasing Managers	336	6.4%	186	\$57.88	□ 4%	\$38.04	□ 19%	B
11-3111	Compensation and Benefits Managers	68	5.5%	33	\$42.88	□ 25%	\$21.65	□ 34%	B
11-3121	Human Resources Managers	512	7.1%	290	\$59.01	□ 11%	\$37.28	□ 19%	B
11-3131	Training and Development Managers	134	7.1%	82	\$48.54	□ 7%	\$31.29	□ 10%	B
11-9141	Property, Real Estate, and Communit...	441	5.4%	229	\$35.39	□ 25%	\$19.25	□ 36%	HS
11-9161	Emergency Management Directors	65	2.5%	29	\$37.19	□ 6%	\$24.73	□ 34%	B
11-9199	Managers, All Other	1,897	9.1%	993	\$55.22	□ 9%	\$35.05	□ 41%	HS
13-1028	Buyers and Purchasing Agents	2,812	0.1%	1,464	\$33.68	□ 9%	\$19.30	□ 12%	A
13-1031	Claims Adjusters, Examiners, and In...	1,065	10.6%	623	\$26.72	□ 14%	\$18.17	□ 3%	HS
13-1032	Insurance Appraisers, Auto Damage	66	16.7%	44	\$35.77	□ 20%	\$23.64	□ 16%	C
13-1041	Compliance Officers	1,327	9.9%	738	\$30.50	□ 7%	\$17.59	□ 4%	B
13-1051	Cost Estimators	1,828	1.5%	1,053	\$29.39	□ 3%	\$18.27	□ 3%	B
13-1071	Human Resources Specialists	3,015	4.9%	1,850	\$28.86	□ 1%	\$17.29	□ 0%	B
13-1075	Labor Relations Specialists	307	-8.6%	143	\$28.68	□ 6%	\$8.68	□ 4%	B
13-1131	Fundraisers	416	6.8%	279	\$24.82	□ 7%	\$16.26	□ 2%	B
13-1141	Compensation, Benefits, and Job Ana...	469	5.6%	257	\$22.85	□ 24%	\$15.38	□ 18%	B
13-1151	Training and Development Specialist...	2,000	5.7%	1,188	\$32.19	□ 11%	\$19.32	□ 21%	B
43-1011	First-Line Supervisors of Office an...	7,688	2.8%	4,551	\$24.57	□ 7%	\$15.04	□ 7%	HS
43-2011	Switchboard Operators, Including An...	216	-0.5%	167	\$12.26	□ 11%	\$8.81	□ 11%	HS
43-2021	Telephone Operators	16	-1.4%	11	\$16.14	□ 8%	\$9.50	□ 12%	HS
43-2099	Communications Equipment Operators,...	11	8.6%	8	\$16.70	□ 16%	\$10.03	□ 12%	HS
43-3011	Bill and Account Collectors	1,628	8.1%	1,257	\$15.06	□ 11%	\$11.17	□ 3%	HS
43-3021	Billing and Posting Clerks	2,315	8.7%	1,671	\$16.10	□ 9%	\$11.71	□ 7%	HS
43-3031	Bookkeeping, Accounting, and Auditi...	7,640	-0.5%	4,933	\$17.79	□ 6%	\$11.58	□ 2%	HS
43-3051	Payroll and Timekeeping Clerks	659	1.1%	400	\$19.61	□ 7%	\$14.14	□ 5%	HS
43-3061	Procurement Clerks	548	0.2%	302	\$19.70	□ 2%	\$13.76	□ 4%	HS
43-3071	Tellers	1,971	-13.2%	1,086	\$13.00	□ 4%	\$9.92	□ 3%	HS
43-3099	Financial Clerks, All Other	57	11.6%	40	\$20.79	□ 8%	\$12.90	□ 1%	HS



Occupational Profiles – Back Office, cont'd

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CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
43-4011	Brokerage Clerks	221	-1.0%	133	\$21.92	□ 8%	\$16.29	□ 1%	HS
43-4021	Correspondence Clerks	20	7.9%	16	\$14.89	□ 15%	\$10.75	□ 9%	HS
43-4031	Court, Municipal, and License Clerk...	437	2.0%	223	\$15.52	□ 13%	\$12.28	□ 5%	HS
43-4041	Credit Authorizers, Checkers, and C...	146	0.0%	86	\$15.56	□ 13%	\$11.71	□ 4%	HS
43-4051	Customer Service Representatives	13,723	6.7%	11,432	\$14.17	□ 10%	\$9.09	□ 11%	HS
43-4061	Eligibility Interviewers, Governmen...	807	6.6%	439	\$17.91	□ 16%	\$12.76	□ 11%	HS
43-4071	File Clerks	377	-2.1%	258	\$10.97	□ 24%	\$7.89	□ 19%	HS
43-4081	Hotel, Motel, and Resort Desk Clerk...	2,120	-0.8%	2,095	\$9.02	□ 18%	\$7.40	□ 13%	HS
43-4111	Interviewers, Except Eligibility an...	1,326	4.4%	942	\$13.99	□ 12%	\$10.74	□ 1%	HS
43-4121	Library Assistants, Clerical	618	1.8%	529	\$12.10	□ 2%	\$7.95	□ 11%	HS
43-4131	Loan Interviewers and Clerks	1,052	3.3%	632	\$17.64	□ 6%	\$12.08	□ 1%	HS
43-4141	New Accounts Clerks	166	-18.0%	56	\$18.31	□ 8%	\$14.23	□ 13%	HS
43-4151	Order Clerks	359	2.1%	267	\$15.08	□ 6%	\$8.85	□ 14%	HS
43-4161	Human Resources Assistants, Except ...	848	1.6%	510	\$17.29	□ 9%	\$12.07	□ 6%	HS
43-4171	Receptionists and Information Clerk...	6,160	4.9%	5,171	\$12.49	□ 9%	\$8.38	□ 13%	HS
43-4181	Reservation and Transportation Tick...	685	-0.8%	399	\$15.67	□ 10%	\$9.94	□ 8%	HS
43-4199	Information and Record Clerks, All ...	1,278	8.2%	930	\$19.44	□ 1%	\$12.70	□ 5%	HS
43-6011	Executive Secretaries and Executive...	2,007	-7.0%	1,057	\$23.64	□ 14%	\$16.17	□ 6%	HS
43-6012	Legal Secretaries	777	-10.8%	369	\$16.19	□ 25%	\$11.67	□ 10%	HS
43-6013	Medical Secretaries	1,137	20.7%	1,008	\$15.50	□ 7%	\$11.69	□ 0%	HS
43-6014	Secretaries and Administrative Assi...	8,877	-2.6%	5,169	\$16.66	□ 3%	\$10.81	□ 2%	HS
43-9011	Computer Operators	150	-7.5%	68	\$20.89	□ 2%	\$13.06	□ 5%	HS
43-9021	Data Entry Keyers	848	-7.9%	464	\$13.20	□ 11%	\$9.32	□ 10%	HS
43-9022	Word Processors and Typists	230	-11.8%	109	\$18.94	□ 1%	\$14.20	□ 10%	HS
43-9041	Insurance Claims and Policy Process...	831	20.3%	674	\$16.53	□ 11%	\$11.56	□ 10%	HS
43-9051	Mail Clerks and Mail Machine Operat...	502	6.1%	380	\$12.93	□ 9%	\$7.93	□ 17%	HS
43-9061	Office Clerks, General	15,523	-0.5%	10,436	\$14.19	□ 6%	\$8.62	□ 10%	HS
43-9071	Office Machine Operators, Except Co...	209	2.1%	152	\$14.02	□ 7%	\$10.05	□ 2%	HS
43-9081	Proofreaders and Copy Markers	42	1.6%	30	\$15.29	□ 15%	\$9.84	□ 10%	B
43-9111	Statistical Assistants	28	12.2%	22	\$22.17	□ 3%	\$15.39	□ 2%	B
43-9199	Office and Administrative Support W...	1,084	5.6%	750	\$18.21	□ 6%	\$12.43	□ 22%	HS



Occupational Profiles - Business

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CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-1011	Chief Executives	925	-3.0%	356	\$89.11	1%	\$22.91	30%	B
11-1021	General and Operations Managers	8,830	6.4%	4,817	\$51.92	8%	\$23.74	11%	B
13-1081	Logisticians	1,873	5.7%	1,047	\$34.14	5%	\$22.47	4%	B
13-1111	Management Analysts	6,148	7.5%	3,774	\$42.99	8%	\$26.13	15%	B
13-1161	Market Research Analysts and Market...	1,966	15.5%	1,514	\$27.33	10%	\$15.45	7%	B
13-1199	Business Operations Specialists, Al...	6,657	7.6%	3,974	\$34.51	3%	\$22.44	23%	HS
19-3011	Economists	33	31.6%	28	\$39.28	20%	\$24.73	9%	M
19-3022	Survey Researchers	32	19.8%	27	\$23.81	9%	\$10.92	16%	M



Occupational Profiles - Computer

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CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-3021	Computer and Information Systems Ma...	1,089	7.7%	592	\$66.10	□ 1%	\$44.86	□ 11%	B
15-1111	Computer and Information Research S...	356	6.4%	161	\$50.33	□ 9%	\$34.68	□ 10%	D
15-1121	Computer Systems Analysts	2,774	3.3%	1,188	\$38.72	□ 9%	\$24.09	□ 7%	B
15-1122	Information Security Analysts	752	10.4%	383	\$41.54	□ 10%	\$28.02	□ 5%	B
15-1131	Computer Programmers	655	-4.3%	215	\$36.73	□ 7%	\$22.53	□ 0%	B
15-1132	Software Developers, Applications	2,494	12.5%	1,344	\$43.99	□ 10%	\$26.48	□ 8%	B
15-1133	Software Developers, Systems Softwa...	1,958	3.2%	821	\$48.96	□ 5%	\$31.69	□ 0%	B
15-1134	Web Developers	463	5.5%	237	\$32.86	□ 1%	\$18.35	□ 4%	A
15-1141	Database Administrators	716	4.4%	310	\$36.08	□ 14%	\$19.80	□ 15%	B
15-1142	Network and Computer Systems Admini...	2,122	2.0%	838	\$38.11	□ 2%	\$24.82	□ 4%	B
15-1143	Computer Network Architects	1,094	1.9%	402	\$44.64	□ 11%	\$27.17	□ 3%	B
15-1151	Computer User Support Specialists	3,235	3.8%	1,533	\$24.25	□ 0%	\$15.49	□ 5%	C
15-1152	Computer Network Support Specialist...	706	4.6%	339	\$27.33	□ 9%	\$16.84	□ 5%	A
15-1199	Computer Occupations, All Other	2,442	7.1%	1,148	\$42.89	□ 1%	\$30.05	□ 35%	B
17-2061	Computer Hardware Engineers	210	7.2%	96	\$52.34	□ 5%	\$32.53	□ 2%	B
17-2071	Electrical Engineers	1,365	5.5%	608	\$42.23	□ 8%	\$27.34	□ 6%	B
17-2072	Electronics Engineers, Except Compu...	1,306	5.1%	571	\$43.54	□ 11%	\$27.27	□ 11%	B
17-3012	Electrical and Electronics Drafters...	147	4.6%	76	\$26.42	□ 8%	\$14.17	□ 18%	A
17-3023	Electrical and Electronics Engineer...	2,244	2.6%	971	\$32.03	□ 5%	\$20.48	□ 14%	A
17-3024	Electro-Mechanical Technicians	275	-0.4%	110	\$26.07	□ 4%	\$18.98	□ 8%	A



Occupational Profiles - Design

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CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
27-1011	Art Directors	62	7.5%	40	\$35.87	□ 19%	\$20.33	□ 17%	B
27-1012	Craft Artists	18	3.4%	10	\$17.59	□ 5%	\$9.78	□ 0%	C
27-1013	Fine Artists, Including Painters, S...	59	3.4%	35	\$28.93	□ 21%	\$18.34	□ 77%	C
27-1014	Multimedia Artists and Animators	75	1.6%	43	\$30.25	□ 11%	\$22.88	□ 21%	B
27-1019	Artists and Related Workers, All Ot...	61	7.9%	41	\$26.01	□ 15%	\$10.59	□ 26%	HS
27-1021	Commercial and Industrial Designers...	79	3.9%	51	\$27.11	□ 15%	\$12.70	□ 27%	B
27-1022	Fashion Designers	14	15.8%	11	\$31.81	□ 2%	\$15.76	□ 3%	B
27-1023	Floral Designers	246	-15.5%	92	\$12.02	□ 5%	\$9.31	□ 1%	HS
27-1024	Graphic Designers	584	6.6%	386	\$21.33	□ 9%	\$12.73	□ 7%	B
27-1025	Interior Designers	168	4.1%	107	\$21.92	□ 11%	\$11.03	□ 16%	B
27-1026	Merchandise Displayers and Window T...	525	1.5%	309	\$14.57	□ 9%	\$9.93	□ 4%	C
27-1027	Set and Exhibit Designers	51	1.9%	30	\$15.89	□ 38%	\$8.39	□ 40%	B
27-1029	Designers, All Other	20	3.1%	12	\$16.86	□ 37%	\$7.78	□ 29%	B
27-4011	Audio and Video Equipment Technicia...	230	5.4%	152	\$18.05	□ 11%	\$11.07	□ 7%	C
27-4012	Broadcast Technicians	221	2.6%	142	\$17.42	□ 7%	\$7.90	□ 20%	A
27-4013	Radio Operators	4	0.0%	2	\$0.00	□	\$0.00	□	C
27-4014	Sound Engineering Technicians	48	-1.5%	26	\$19.27	□ 28%	\$8.24	□ 34%	C
27-4021	Photographers	241	-11.4%	92	\$10.09	□ 35%	\$7.30	□ 22%	C
27-4031	Camera Operators, Television, Video...	45	6.4%	28	\$24.74	□ 4%	\$14.40	□ 17%	B
27-4032	Film and Video Editors	38	7.1%	24	\$26.40	□ 10%	\$15.46	□ 7%	B
27-4099	Media and Communication Equipment W...	190	3.8%	118	\$39.69	□ 4%	\$27.61	□ 75%	C
41-9011	Demonstrators and Product Promoters...	568	4.3%	611	\$14.95	□ 15%	\$10.52	□ 10%	HS
41-9012	Models	33	1.1%	34	\$9.84	□ 11%	\$7.30	□ 11%	<HS
43-9031	Desktop Publishers	21	-0.2%	13	\$20.67	□ 2%	\$10.90	□ 3%	A



Occupational Profiles - Education

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CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-9031	Education Administrators, Preschool...	179	4.1%	82	\$22.13	□ 2%	\$15.67	□ 9%	B
11-9032	Education Administrators, Elementar...	1,451	0.9%	600	\$40.62	□ 10%	\$28.44	□ 3%	M
11-9033	Education Administrators, Postsecon...	678	1.1%	287	\$42.74	□ 4%	\$25.44	□ 0%	M
11-9039	Education Administrators, All Other...	238	6.1%	115	\$50.34	□ 28%	\$31.15	□ 48%	B
25-1099	Postsecondary Teachers	7,659	2.5%	3,861	\$29.56	□ 13%	\$15.65	□ 6%	D
25-2011	Preschool Teachers, Except Special ...	1,688	3.7%	1,033	\$13.67	□ 2%	\$8.96	□ 7%	A
25-2012	Kindergarten Teachers, Except Speci...	921	1.0%	523	\$31.01	□ 19%	\$19.61	□ 17%	B
25-2021	Elementary School Teachers, Except ...	6,585	0.7%	3,043	\$30.99	□ 13%	\$20.19	□ 12%	B
25-2022	Middle School Teachers, Except Spec...	3,348	0.8%	1,548	\$31.17	□ 12%	\$20.48	□ 11%	B
25-2023	Career/Technical Education Teachers...	42	0.5%	20	\$31.05	□ 10%	\$20.39	□ 9%	B
25-2031	Secondary School Teachers, Except S...	4,594	0.8%	2,043	\$30.81	□ 8%	\$20.26	□ 8%	B
25-2032	Career/Technical Education Teachers...	576	0.6%	252	\$31.02	□ 10%	\$20.77	□ 8%	B
25-2051	Special Education Teachers, Prescho...	105	3.1%	50	\$28.97	□ 12%	\$18.44	□ 16%	B
25-2052	Special Education Teachers, Kinderg...	1,065	0.9%	478	\$31.91	□ 13%	\$20.93	□ 14%	B
25-2053	Special Education Teachers, Middle ...	594	0.7%	266	\$32.33	□ 13%	\$20.70	□ 8%	B
25-2054	Special Education Teachers, Seconda...	803	0.9%	362	\$30.75	□ 6%	\$19.84	□ 4%	B
25-2059	Special Education Teachers, All Oth...	203	2.7%	97	\$19.99	□ 24%	\$11.06	□ 34%	B
25-3011	Adult Basic and Secondary Education...	351	-4.9%	204	\$23.67	□ 5%	\$18.48	□ 23%	B
25-3021	Self-Enrichment Education Teachers	866	8.2%	652	\$17.37	□ 6%	\$8.15	□ 16%	C
25-3097	Teachers and Instructors, All Other...	1,589	5.2%	1,143	\$27.01	□ 41%	\$11.78	□ 18%	B
25-3098	Substitute Teachers	3,948	1.1%	2,595	\$12.95	□ 5%	\$8.97	□ 1%	B
25-4011	Archivists	38	5.0%	26	\$21.84	□ 12%	\$12.79	□ 15%	M
25-4012	Curators	87	-1.5%	54	\$26.25	□ 2%	\$16.27	□ 16%	M
25-4013	Museum Technicians and Conservators...	123	1.5%	81	\$18.49	□ 5%	\$12.83	□ 13%	B
25-4021	Librarians	787	1.9%	448	\$30.12	□ 7%	\$19.93	□ 21%	M
25-4031	Library Technicians	498	2.3%	433	\$15.09	□ 7%	\$9.96	□ 2%	C
25-9011	Audio-Visual and Multimedia Collect...	39	1.7%	21	\$19.48	□ 17%	\$12.30	□ 5%	B
25-9021	Farm and Home Management Advisors	48	1.8%	26	\$15.97	□ 33%	\$11.17	□ 10%	M
25-9031	Instructional Coordinators	942	2.2%	520	\$32.10	□ 5%	\$18.02	□ 5%	M
25-9041	Teacher Assistants	5,711	1.5%	3,400	\$11.43	□ 9%	\$7.54	□ 15%	C
25-9099	Education, Training, and Library Wo...	346	5.0%	205	\$19.37	□ 7%	\$10.35	□ 0%	B



Occupational Profiles - Engineering

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-9041	Architectural and Engineering Manag...	761	5.7%	362	\$63.82	□ 4%	\$48.65	□ 15%	B
11-9121	Natural Sciences Managers	215	10.6%	124	\$46.20	□ 19%	\$30.10	□ 1%	B
17-2011	Aerospace Engineers	809	4.9%	320	\$54.94	□ 1%	\$36.49	□ 7%	B
17-2021	Agricultural Engineers	19	2.8%	8	\$30.47	□ 15%	\$20.41	□ 10%	B
17-2031	Biomedical Engineers	88	4.1%	39	\$36.82	□ 13%	\$26.23	□ 5%	B
17-2041	Chemical Engineers	123	5.6%	57	\$51.00	□ 4%	\$33.05	□ 10%	B
17-2051	Civil Engineers	2,184	3.5%	1,090	\$39.51	□ 3%	\$25.57	□ 2%	B
17-2081	Environmental Engineers	348	6.2%	182	\$39.53	□ 5%	\$25.94	□ 3%	B
17-2111	Health and Safety Engineers, Except...	135	4.9%	63	\$36.48	□ 14%	\$23.32	□ 6%	B
17-2112	Industrial Engineers	940	8.0%	469	\$38.98	□ 6%	\$26.12	□ 2%	B
17-2121	Marine Engineers and Naval Architec...	981	3.2%	341	\$39.62	□ 9%	\$27.99	□ 9%	B
17-2131	Materials Engineers	142	4.8%	57	\$48.46	□ 7%	\$28.54	□ 4%	B
17-2141	Mechanical Engineers	1,887	6.6%	875	\$39.49	□ 4%	\$25.30	□ 5%	B
17-2151	Mining and Geological Engineers, In...	41	5.0%	20	\$33.07	□ 27%	\$22.16	□ 16%	B
17-2161	Nuclear Engineers	1,257	2.4%	470	\$38.55	□ 24%	\$27.23	□ 15%	B
17-2171	Petroleum Engineers	67	7.6%	33	\$53.73	□ 16%	\$33.80	□ 6%	B
17-2199	Engineers, All Other	1,430	5.6%	638	\$48.21	□ 3%	\$23.43	□ 4%	B
17-3011	Architectural and Civil Drafters	451	2.7%	224	\$23.64	□ 7%	\$13.57	□ 17%	A
17-3013	Mechanical Drafters	1,020	2.3%	503	\$25.50	□ 4%	\$18.00	□ 7%	A
17-3019	Drafters, All Other	93	2.9%	47	\$22.76	□ 6%	\$15.70	□ 1%	A
17-3021	Aerospace Engineering and Operation...	84	6.4%	40	\$25.82	□ 20%	\$15.94	□ 23%	A
17-3022	Civil Engineering Technicians	503	2.7%	226	\$25.94	□ 5%	\$16.61	□ 7%	A
17-3025	Environmental Engineering Technicia...	95	6.7%	47	\$19.89	□ 18%	\$12.84	□ 15%	A
17-3026	Industrial Engineering Technicians	298	5.8%	142	\$25.44	□ 3%	\$15.74	□ 4%	A
17-3027	Mechanical Engineering Technicians	349	4.5%	166	\$23.76	□ 11%	\$17.51	□ 6%	A
17-3029	Engineering Technicians, Except Dra...	2,108	3.4%	935	\$37.00	□ 24%	\$24.79	□ 47%	A
17-3031	Surveying and Mapping Technicians	313	3.5%	163	\$18.17	□ 13%	\$12.38	□ 3%	C



Occupational Profiles – Engineering, cont'd

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
19-1011	Animal Scientists	11	5.6%	7	\$22.90	□ 22%	\$14.23	□ 17%	D
19-1012	Food Scientists and Technologists	26	8.0%	17	\$26.91	□ 12%	\$14.66	□ 20%	B
19-1013	Soil and Plant Scientists	40	10.3%	28	\$25.80	□ 14%	\$16.29	□ 11%	B
19-1021	Biochemists and Biophysicists	49	9.6%	33	\$21.78	□ 50%	\$12.85	□ 45%	D
19-1022	Microbiologists	101	7.0%	65	\$37.59	□ 12%	\$19.17	□ 2%	B
19-1023	Zoologists and Wildlife Biologists	144	6.6%	91	\$24.44	□ 18%	\$16.13	□ 15%	B
19-1029	Biological Scientists, All Other	226	11.2%	157	\$32.52	□ 12%	\$19.83	□ 4%	B
19-1031	Conservation Scientists	54	16.7%	43	\$36.00	□ 22%	\$16.89	□ 4%	B
19-1032	Foresters	68	4.3%	43	\$23.80	□ 18%	\$16.29	□ 16%	B
19-1041	Epidemiologists	33	4.9%	18	\$30.69	□ 8%	\$20.73	□ 1%	M
19-1042	Medical Scientists, Except Epidemio...	305	8.1%	176	\$38.85	□ 2%	\$18.55	□ 14%	D
19-1099	Life Scientists, All Other	20	5.9%	11	\$26.89	□ 25%	\$17.39	□ 15%	B
19-2011	Astronomers	11	7.4%	7	\$44.32	□ 8%	\$23.21	□ 11%	D
19-2012	Physicists	313	5.8%	180	\$38.00	□ 33%	\$23.33	□ 16%	D
19-2021	Atmospheric and Space Scientists	57	11.6%	36	\$38.74	□ 12%	\$23.99	□ 1%	B
19-2031	Chemists	228	8.2%	152	\$33.32	□ 7%	\$20.11	□ 3%	B
19-2032	Materials Scientists	35	4.7%	22	\$48.86	□ 2%	\$24.58	□ 0%	B
19-2041	Environmental Scientists and Specia...	426	8.0%	290	\$29.13	□ 13%	\$19.36	□ 3%	B
19-2042	Geoscientists, Except Hydrologists ...	70	11.6%	51	\$34.17	□ 21%	\$20.61	□ 12%	B
19-2043	Hydrologists	20	16.7%	16	\$34.83	□ 9%	\$19.88	□ 19%	M
19-2099	Physical Scientists, All Other	304	5.6%	167	\$51.00	□ 2%	\$28.44	□ 18%	B
19-4011	Agricultural and Food Science Techn...	64	5.5%	44	\$16.05	□ 16%	\$10.70	□ 16%	A
19-4021	Biological Technicians	230	9.1%	190	\$17.30	□ 18%	\$12.89	□ 8%	B
19-4031	Chemical Technicians	209	5.3%	131	\$20.54	□ 10%	\$13.81	□ 1%	A
19-4041	Geological and Petroleum Technician...	15	12.6%	11	\$19.46	□ 25%	\$12.23	□ 6%	A
19-4051	Nuclear Technicians	15	2.0%	11	\$28.69	□ 26%	\$18.95	□ 18%	A
19-4091	Environmental Science and Protectio...	148	9.1%	122	\$20.05	□ 8%	\$11.81	□ 13%	A
19-4093	Forest and Conservation Technicians...	118	19.9%	110	\$17.22	□ 1%	\$12.48	□ 1%	A
19-4099	Life, Physical, and Social Science ...	803	4.9%	605	\$22.60	□ 2%	\$13.54	□ 1%	A



Occupational Profiles - Financial

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-3031	Financial Managers	1,681	11.7%	1,010	\$56.26	□ 6%	\$34.68	□ 8%	B
13-2011	Accountants and Auditors	5,804	5.1%	3,375	\$33.02	□ 1%	\$21.56	□ 4%	B
13-2021	Appraisers and Assessors of Real Es...	246	3.9%	102	\$23.85	□ 8%	\$13.91	□ 2%	B
13-2031	Budget Analysts	517	5.4%	257	\$34.61	□ 4%	\$23.19	□ 3%	B
13-2041	Credit Analysts	164	7.1%	99	\$34.06	□ 1%	\$18.55	□ 8%	B
13-2051	Financial Analysts	672	8.4%	408	\$33.16	□ 18%	\$20.84	□ 16%	B
13-2052	Personal Financial Advisors	858	1.2%	422	\$43.45	□ 0%	\$20.51	□ 5%	B
13-2053	Insurance Underwriters	195	16.0%	123	\$24.37	□ 27%	\$14.46	□ 28%	B
13-2061	Financial Examiners	127	13.3%	81	\$23.82	□ 39%	\$13.63	□ 40%	B
13-2071	Credit Counselors	194	7.1%	109	\$19.54	□ 9%	\$13.39	□ 6%	B
13-2072	Loan Officers	1,361	2.6%	677	\$27.93	□ 10%	\$13.12	□ 16%	B
13-2081	Tax Examiners and Collectors, and R...	265	6.2%	116	\$21.17	□ 17%	\$14.19	□ 7%	B
13-2082	Tax Preparers	343	2.9%	223	\$11.03	□ 41%	\$7.30	□ 25%	C
13-2099	Financial Specialists, All Other	985	6.0%	560	\$34.21	□ 2%	\$22.74	□ 23%	B
41-3021	Insurance Sales Agents	1,982	11.3%	1,367	\$19.39	□ 19%	\$11.48	□ 12%	HS
41-3031	Securities, Commodities, and Financ...	1,189	-2.2%	629	\$24.49	□ 20%	\$14.76	□ 7%	B
41-9021	Real Estate Brokers	443	2.9%	256	\$29.53	□ 8%	\$14.17	□ 22%	C
41-9022	Real Estate Sales Agents	1,840	2.9%	1,065	\$27.14	□ 23%	\$13.50	□ 21%	C



Occupational Profiles - Hospitality

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-9051	Food Service Managers	736	7.0%	514	\$27.32	□ 9%	\$16.44	□ 15%	HS
11-9071	Gaming Managers	14	2.5%	9	\$20.03	□ 43%	\$13.07	□ 41%	C
11-9081	Lodging Managers	176	0.4%	103	\$30.33	□ 22%	\$16.36	□ 18%	C
13-1121	Meeting, Convention, and Event Plan...	461	4.8%	323	\$23.05	□ 1%	\$15.59	□ 23%	B
35-1011	Chefs and Head Cooks	778	5.6%	582	\$23.34	□ 6%	\$12.78	□ 6%	C
35-1012	First-Line Supervisors of Food Prep...	6,199	4.6%	5,515	\$14.33	□ 7%	\$8.74	□ 14%	C
35-2011	Cooks, Fast Food	2,899	-2.3%	2,358	\$8.52	□ 16%	\$7.38	□ 10%	<HS
35-2012	Cooks, Institution and Cafeteria	1,691	3.2%	1,530	\$12.86	□ 3%	\$9.03	□ 2%	<HS
35-2013	Cooks, Private Household	4	0.0%	3	\$0.00	□	\$0.00	□	C
35-2014	Cooks, Restaurant	6,902	7.5%	6,578	\$10.59	□ 12%	\$7.83	□ 13%	C
35-2015	Cooks, Short Order	425	2.7%	375	\$10.75	□ 2%	\$8.36	□ 3%	<HS
35-2019	Cooks, All Other	43	9.0%	42	\$9.73	□ 28%	\$7.28	□ 24%	<HS
35-2021	Food Preparation Workers	3,918	5.1%	4,379	\$8.96	□ 18%	\$7.34	□ 14%	<HS
35-3011	Bartenders	2,520	4.8%	2,502	\$10.29	□ 1%	\$7.57	□ 10%	C
35-3021	Combined Food Preparation and Servi...	19,245	7.8%	23,433	\$8.74	□ 10%	\$7.51	□ 8%	<HS
35-3022	Counter Attendants, Cafeteria, Food...	1,976	3.7%	2,915	\$8.51	□ 17%	\$7.27	□ 14%	<HS
35-3031	Waiters and Waitresses	16,934	4.8%	20,189	\$9.19	□ 8%	\$7.42	□ 10%	<HS
35-3041	Food Servers, Nonrestaurant	1,800	4.0%	1,615	\$9.49	□ 12%	\$7.53	□ 11%	<HS
35-9011	Dining Room and Cafeteria Attendant...	1,484	6.3%	1,625	\$9.12	□ 10%	\$7.42	□ 12%	<HS
35-9021	Dishwashers	2,610	3.7%	2,751	\$8.72	□ 16%	\$7.35	□ 13%	<HS
35-9031	Hosts and Hostesses, Restaurant, Lo...	2,592	4.9%	3,891	\$8.85	□ 12%	\$7.39	□ 11%	<HS
35-9099	Food Preparation and Serving Relate...	322	5.3%	349	\$8.25	□ 24%	\$7.30	□ 15%	<HS
37-1011	First-Line Supervisors of Housekeep...	1,117	0.0%	687	\$16.68	□ 12%	\$10.00	□ 16%	HS
37-1012	First-Line Supervisors of Landscapi...	418	5.7%	235	\$22.08	□ 2%	\$13.85	□ 2%	HS
37-2011	Janitors and Cleaners, Except Maids...	11,061	1.1%	8,774	\$10.16	□ 16%	\$7.43	□ 17%	<HS
37-2012	Maids and Housekeeping Cleaners	5,735	2.7%	4,895	\$9.33	□ 15%	\$7.45	□ 13%	<HS
37-2019	Building Cleaning Workers, All Othe...	168	-1.8%	126	\$12.50	□ 11%	\$8.06	□ 17%	<HS
37-2021	Pest Control Workers	712	10.7%	617	\$15.15	□ 8%	\$11.44	□ 5%	HS



Occupational Profiles – Hospitality, cont'd

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
37-3011	Landscaping and Groundskeeping Work...	4,463	4.8%	3,469	\$11.72	□ 12%	\$8.48	□ 12%	<HS
37-3012	Pesticide Handlers, Sprayers, and A...	195	4.3%	150	\$13.76	□ 18%	\$10.03	□ 11%	HS
37-3013	Tree Trimmers and Pruners	262	4.5%	203	\$15.25	□ 13%	\$10.43	□ 6%	HS
37-3019	Grounds Maintenance Workers, All Ot...	98	3.9%	75	\$14.84	□ 3%	\$9.51	□ 3%	<HS
39-1018	First-Line Supervisors of Gaming Wo...	4	152.9%	11	\$0.00	□	\$0.00	□	HS
39-1021	First-Line Supervisors of Personal ...	1,098	7.4%	710	\$19.10	□ 6%	\$12.23	□ 9%	HS
39-2011	Animal Trainers	57	11.6%	51	\$11.82	□ 15%	\$7.71	□ 18%	HS
39-2021	Nonfarm Animal Caretakers	1,274	12.1%	1,444	\$9.61	□ 13%	\$7.35	□ 14%	<HS
39-3011	Gaming Dealers	30	9.7%	33	\$8.04	□ 16%	\$7.34	□ 9%	HS
39-3012	Gaming and Sports Book Writers and ...	18	2.5%	18	\$9.14	□ 21%	\$7.36	□ 17%	HS
39-3019	Gaming Service Workers, All Other	4	0.0%	4	\$0.00	□	\$0.00	□	HS
39-3021	Motion Picture Projectionists	62	0.2%	63	\$9.31	□ 12%	\$7.38	□ 13%	<HS
39-3031	Ushers, Lobby Attendants, and Ticke...	741	6.8%	1,180	\$8.51	□ 15%	\$7.33	□ 11%	<HS
39-3091	Amusement and Recreation Attendants...	2,287	5.1%	3,331	\$8.60	□ 15%	\$7.35	□ 12%	<HS
39-3092	Costume Attendants	17	6.6%	26	\$12.86	□ 37%	\$7.96	□ 24%	HS
39-3093	Locker Room, Coatroom, and Dressing...	29	8.7%	44	\$8.58	□ 22%	\$7.33	□ 15%	HS
39-3099	Entertainment Attendants and Relate...	29	7.5%	44	\$9.02	□ 22%	\$7.25	□ 17%	HS
39-6011	Baggage Porters and Bellhops	145	5.3%	127	\$9.94	□ 11%	\$7.46	□ 15%	HS
39-6012	Concierges	240	4.5%	209	\$12.21	□ 16%	\$7.79	□ 23%	HS
39-7018	Tour and Travel Guides	607	-0.6%	631	\$8.78	□ 23%	\$7.26	□ 17%	HS
41-2012	Gaming Change Persons and Booth Cas...	27	3.0%	31	\$9.01	□ 22%	\$7.37	□ 18%	HS
41-3041	Travel Agents	375	4.5%	280	\$21.53	□ 21%	\$11.66	□ 14%	HS
43-3041	Gaming Cage Workers	4	0.0%	3	\$0.00	□	\$0.00	□	HS



Occupational Profiles - Logistics

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
11-3071	Transportation, Storage, and Distri...	316	10.4%	177	\$48.53	□ 9%	\$33.02	□ 27%	HS
43-5011	Cargo and Freight Agents	1,019	9.9%	613	\$23.95	□ 19%	\$14.49	□ 17%	HS
43-5021	Couriers and Messengers	286	8.1%	183	\$13.13	□ 3%	\$9.49	□ 2%	HS
43-5061	Production, Planning, and Expeditin...	2,506	3.7%	1,547	\$27.34	□ 22%	\$15.51	□ 13%	HS
43-5071	Shipping, Receiving, and Traffic Cl...	2,743	2.4%	1,719	\$15.93	□ 4%	\$10.34	□ 1%	HS
43-5081	Stock Clerks and Order Fillers	11,828	3.6%	9,633	\$11.93	□ 1%	\$8.76	□ 3%	<HS
43-5111	Weighers, Measurers, Checkers, and ...	306	4.3%	191	\$14.33	□ 1%	\$9.23	□ 6%	HS
53-1011	Aircraft Cargo Handling Supervisors...	42	-1.9%	24	\$27.15	□ 17%	\$17.14	□ 12%	HS
53-1048	First-line Supervisors of Transport...	1,955	4.6%	1,296	\$24.99	□ 3%	\$13.84	□ 11%	HS
53-2011	Airline Pilots, Copilots, and Fligh...	150	2.2%	78	\$70.57	□ 7%	\$32.13	□ 2%	B
53-2012	Commercial Pilots	92	15.8%	70	\$28.87	□ 24%	\$17.43	□ 17%	C
53-2021	Air Traffic Controllers	97	22.2%	72	\$46.98	□ 22%	\$29.99	□ 7%	A
53-2022	Airfield Operations Specialists	51	9.5%	30	\$21.53	□ 14%	\$14.01	□ 6%	HS
53-2031	Flight Attendants	62	9.3%	46	\$20.59	□ 15%	\$12.22	□ 5%	C
53-3011	Ambulance Drivers and Attendants, E...	60	30.6%	71	\$10.21	□ 12%	\$7.51	□ 17%	HS
53-3021	Bus Drivers, Transit and Intercity	998	8.8%	878	\$16.16	□ 18%	\$9.82	□ 18%	HS
53-3022	Bus Drivers, School or Special Clie...	3,569	-1.3%	2,554	\$12.47	□ 16%	\$7.77	□ 14%	HS
53-3031	Driver/Sales Workers	4,092	-4.6%	2,289	\$8.60	□ 26%	\$7.28	□ 14%	HS
53-3032	Heavy and Tractor-Trailer Truck Dri...	6,768	2.9%	4,532	\$18.80	□ 8%	\$12.96	□ 2%	C
53-3033	Light Truck or Delivery Services Dr...	4,641	2.5%	3,077	\$12.66	□ 16%	\$7.91	□ 16%	HS
53-3041	Taxi Drivers and Chauffeurs	1,207	-6.6%	625	\$11.04	□ 8%	\$7.85	□ 13%	<HS
53-3099	Motor Vehicle Operators, All Other	259	5.6%	301	\$11.67	□ 9%	\$7.44	□ 16%	HS
53-4011	Locomotive Engineers	4	0.0%	2	\$0.00	□	\$0.00	□	HS
53-4012	Locomotive Firers	0	-	0	\$0.00	□	\$0.00	□	HS
53-4013	Rail Yard Engineers, Dinkey Operato...	4	0.0%	2	\$0.00	□	\$0.00	□	HS
53-4021	Railroad Brake, Signal, and Switch ...	4	0.0%	2	\$0.00	□	\$0.00	□	HS
53-4031	Railroad Conductors and Yardmasters...	15	3.0%	9	\$24.33	□ 16%	\$17.06	□ 17%	HS
53-4041	Subway and Streetcar Operators	31	3.1%	19	\$27.57	□ 14%	\$17.14	□ 20%	HS
53-4099	Rail Transportation Workers, All Ot...	4	0.0%	2	\$0.00	□	\$0.00	□	HS



Occupational Profiles – Logistics, cont'd

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
53-5011	Sailors and Marine Oilers	2,086	-3.5%	1,286	\$20.61	□ 5%	\$16.33	□ 42%	<HS
53-5021	Captains, Mates, and Pilots of Wate...	1,886	-4.2%	993	\$33.73	□ 1%	\$22.64	□ 32%	B
53-5022	Motorboat Operators	32	-0.6%	18	\$18.30	□ 15%	\$7.84	□ 22%	HS
53-5031	Ship Engineers	1,323	-2.8%	822	\$28.05	□ 20%	\$18.45	□ 7%	B
53-6011	Bridge and Lock Tenders	4	168.8%	11	\$0.00	□	\$0.00	□	HS
53-6021	Parking Lot Attendants	396	9.1%	431	\$9.76	□ 11%	\$7.43	□ 16%	<HS
53-6031	Automotive and Watercraft Service A...	440	5.9%	448	\$10.32	□ 8%	\$7.78	□ 13%	<HS
53-6041	Traffic Technicians	67	3.8%	46	\$23.56	□ 7%	\$15.23	□ 14%	HS
53-6051	Transportation Inspectors	204	4.8%	137	\$32.44	□ 6%	\$15.73	□ 8%	HS
53-6061	Transportation Attendants, Except F...	99	8.7%	89	\$11.28	□ 16%	\$7.43	□ 18%	HS
53-6099	Transportation Workers, All Other	263	4.3%	181	\$16.70	□ 6%	\$8.75	□ 14%	HS
53-7011	Conveyor Operators and Tenders	139	-0.8%	98	\$12.92	□ 17%	\$10.18	□ 8%	<HS
53-7021	Crane and Tower Operators	538	-0.3%	363	\$28.56	□ 14%	\$20.54	□ 38%	HS
53-7031	Dredge Operators	4	0.0%	3	\$0.00	□	\$0.00	□	<HS
53-7032	Excavating and Loading Machine and ...	75	7.1%	63	\$20.89	□ 2%	\$15.21	□ 11%	HS
53-7033	Loading Machine Operators, Undergro...	4	0.0%	3	\$0.00	□	\$0.00	□	<HS
53-7041	Hoist and Winch Operators	15	1.2%	11	\$17.09	□ 18%	\$11.10	□ 17%	<HS
53-7051	Industrial Truck and Tractor Operat...	2,836	5.6%	2,013	\$19.69	□ 22%	\$13.56	□ 19%	<HS
53-7061	Cleaners of Vehicles and Equipment	2,168	4.5%	2,002	\$9.45	□ 16%	\$7.73	□ 11%	<HS
53-7062	Laborers and Freight, Stock, and Ma...	10,363	5.5%	9,226	\$12.92	□ 1%	\$9.68	□ 1%	<HS
53-7063	Machine Feeders and Offbearers	158	6.5%	139	\$12.97	□ 5%	\$8.65	□ 12%	<HS
53-7064	Packers and Packagers, Hand	2,961	3.8%	2,754	\$10.43	□ 7%	\$7.83	□ 11%	<HS
53-7071	Gas Compressor and Gas Pumping Stat...	4	0.0%	3	\$0.00	□	\$0.00	□	<HS
53-7072	Pump Operators, Except Wellhead Pum...	13	7.3%	11	\$18.08	□ 14%	\$10.60	□ 21%	<HS
53-7073	Wellhead Pumpers	4	0.0%	2	\$0.00	□	\$0.00	□	<HS
53-7081	Refuse and Recyclable Material Coll...	657	5.0%	522	\$15.47	□ 11%	\$9.08	□ 12%	<HS
53-7111	Mine Shuttle Car Operators	4	-100.0%	(3)	\$0.00	□	\$0.00	□	<HS
53-7121	Tank Car, Truck, and Ship Loaders	75	-0.9%	48	\$17.19	□ 3%	\$11.53	□ 1%	<HS
53-7199	Material Moving Workers, All Other	62	9.3%	49	\$15.20	□ 7%	\$7.77	□ 25%	<HS



Occupational Profiles - Math

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
15-2011	Actuaries	58	26.9%	42	\$52.49	□ 7%	\$32.85	□ 14%	B
15-2021	Mathematicians	181	13.3%	96	\$52.33	□ 6%	\$30.81	□ 21%	M
15-2031	Operations Research Analysts	859	14.8%	444	\$48.08	□ 23%	\$25.90	□ 19%	B
15-2041	Statisticians	209	20.0%	127	\$28.67	□ 29%	\$20.28	□ 17%	M
15-2098	Miscellaneous Mathematical Science ...	41	4.7%	17	\$43.16	□ 8%	\$23.92	□ 16%	B

Occupational Profiles - Mechanics

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
49-1011	First-Line Supervisors of Mechanics...	3,096	2.9%	1,685	\$31.87	□ 2%	\$20.81	□ 10%	HS
49-2011	Computer, Automated Teller, and Off...	728	-1.4%	396	\$23.06	□ 27%	\$12.12	□ 7%	C
49-2021	Radio, Cellular, and Tower Equipmen...	244	5.1%	155	\$27.49	□ 2%	\$21.21	□ 35%	A
49-2022	Telecommunications Equipment Instal...	1,154	3.4%	691	\$27.98	□ 9%	\$16.27	□ 9%	C
49-2091	Avionics Technicians	79	12.2%	51	\$31.00	□ 3%	\$24.27	□ 26%	A
49-2092	Electric Motor, Power Tool, and Rel...	179	-2.7%	104	\$18.52	□ 10%	\$13.29	□ 9%	C
49-2093	Electrical and Electronics Installe...	355	-0.1%	191	\$31.92	□ 9%	\$22.05	□ 24%	C
49-2094	Electrical and Electronics Repairer...	725	3.8%	416	\$24.41	□ 11%	\$17.15	□ 1%	C
49-2095	Electrical and Electronics Repairer...	176	-4.8%	83	\$39.62	□ 5%	\$24.09	□ 4%	C
49-2096	Electronic Equipment Installers and...	77	-11.2%	31	\$17.12	□ 3%	\$13.65	□ 29%	C
49-2097	Electronic Home Entertainment Equip...	91	2.8%	55	\$15.97	□ 11%	\$9.74	□ 8%	C
49-2098	Security and Fire Alarm Systems Ins...	533	-2.2%	321	\$20.40	□ 7%	\$13.47	□ 2%	HS
49-3011	Aircraft Mechanics and Service Tech...	579	10.0%	321	\$30.36	□ 3%	\$16.60	□ 4%	C
49-3021	Automotive Body and Related Repaire...	1,033	6.1%	627	\$22.10	□ 10%	\$11.70	□ 4%	C
49-3022	Automotive Glass Installers and Rep...	198	6.9%	119	\$16.26	□ 1%	\$11.68	□ 5%	HS
49-3023	Automotive Service Technicians and ...	3,988	1.3%	2,231	\$20.02	□ 5%	\$10.19	□ 6%	C
49-3031	Bus and Truck Mechanics and Diesel ...	1,409	3.1%	788	\$21.69	□ 3%	\$15.72	□ 8%	C
49-3041	Farm Equipment Mechanics and Servic...	25	5.4%	16	\$16.06	□ 15%	\$10.02	□ 20%	C
49-3042	Mobile Heavy Equipment Mechanics, E...	1,181	2.0%	699	\$24.71	□ 1%	\$16.79	□ 5%	C
49-3043	Rail Car Repairers	73	16.3%	61	\$26.88	□ 3%	\$15.15	□ 5%	C
49-3051	Motorboat Mechanics and Service Tec...	208	0.8%	127	\$17.60	□ 6%	\$9.77	□ 15%	C
49-3052	Motorcycle Mechanics	72	-0.6%	41	\$15.43	□ 10%	\$9.58	□ 14%	C
49-3053	Outdoor Power Equipment and Other S...	99	3.6%	62	\$15.80	□ 4%	\$10.91	□ 3%	C
49-3091	Bicycle Repairers	125	11.3%	108	\$13.72	□ 1%	\$9.43	□ 2%	HS
49-3092	Recreational Vehicle Service Techni...	67	-1.4%	46	\$14.92	□ 17%	\$8.63	□ 27%	HS
49-3093	Tire Repairers and Changers	534	1.0%	387	\$10.34	□ 19%	\$7.54	□ 20%	HS
49-9011	Mechanical Door Repairers	146	-3.0%	65	\$14.62	□ 23%	\$10.02	□ 22%	HS
49-9012	Control and Valve Installers and Re...	245	2.8%	124	\$26.79	□ 0%	\$15.34	□ 0%	HS
49-9021	Heating, Air Conditioning, and Refr...	2,550	4.1%	1,625	\$21.32	□ 6%	\$11.64	□ 17%	C



Occupational Profiles – Mechanics, cont'd

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE	VERSUS US	ENTRY WAGE	VERSUS US	TYPICAL EDUCATION
49-9031	Home Appliance Repairers	295	-9.1%	118	\$16.64	□ 9%	\$11.32	□ 2%	C
49-9041	Industrial Machinery Mechanics	1,708	1.8%	924	\$25.80	□ 4%	\$16.73	□ 5%	C
49-9043	Maintenance Workers, Machinery	238	5.1%	168	\$21.78	□ 1%	\$13.63	□ 1%	C
49-9044	Millwrights	176	3.1%	108	\$26.51	□ 2%	\$18.99	□ 18%	C
49-9045	Refractory Materials Repairers, Exc...	15	-6.6%	7	\$23.62	□ 1%	\$12.63	□ 11%	C
49-9051	Electrical Power-Line Installers an...	360	-2.2%	169	\$27.17	□ 19%	\$18.94	□ 5%	C
49-9052	Telecommunications Line Installers ...	705	1.6%	414	\$31.62	□ 19%	\$16.58	□ 19%	C
49-9061	Camera and Photographic Equipment R...	22	-0.2%	12	\$17.59	□ 10%	\$9.87	□ 14%	A
49-9062	Medical Equipment Repairers	289	3.9%	177	\$21.20	□ 10%	\$12.77	□ 10%	A
49-9063	Musical Instrument Repairers and Tu...	35	-1.5%	19	\$15.11	□ 14%	\$8.95	□ 16%	C
49-9064	Watch Repairers	16	-15.4%	6	\$14.95	□ 13%	\$8.86	□ 14%	C
49-9069	Precision Instrument and Equipment ...	73	5.2%	45	\$26.59	□ 3%	\$18.42	□ 14%	C
49-9071	Maintenance and Repair Workers, Gen...	6,776	3.3%	3,988	\$17.70	□ 2%	\$10.78	□ 2%	C
49-9081	Wind Turbine Service Technicians	4	0.0%	2	\$0.00	□	\$0.00	□	C
49-9091	Coin, Vending, and Amusement Machin...	169	-5.8%	100	\$17.50	□ 8%	\$7.81	□ 20%	HS
49-9092	Commercial Divers	118	1.1%	71	\$27.22	□ 20%	\$18.13	□ 25%	C
49-9093	Fabric Menders, Except Garment	4	0.0%	2	\$0.00	□	\$0.00	□	<HS
49-9094	Locksmiths and Safe Repairers	101	-12.6%	44	\$17.47	□ 11%	\$8.26	□ 25%	C
49-9095	Manufactured Building and Mobile Ho...	14	-7.2%	6	\$13.26	□ 11%	\$8.88	□ 14%	HS
49-9096	Riggers	885	1.0%	543	\$22.67	□ 3%	\$14.74	□ 6%	HS
49-9097	Signal and Track Switch Repairers	32	1.8%	19	\$33.04	□ 0%	\$19.40	□ 11%	HS
49-9098	Helpers--Installation, Maintenance,...	644	3.0%	481	\$11.82	□ 14%	\$7.72	□ 17%	HS
49-9099	Installation, Maintenance, and Repa...	1,442	3.2%	878	\$23.37	□ 25%	\$12.53	□ 11%	HS



Occupational Profiles - Medical

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US	ENTRY WAGE VERSUS US	TYPICAL EDUCATION
11-9111	Medical and Health Services Manager...	1,434	12.8%	833	\$45.42	\$26.55	B
19-3031	Clinical, Counseling, and School Ps...	545	6.1%	277	\$33.67	\$20.63	D
19-3032	Industrial-Organizational Psycholog...	15	7.2%	8	\$42.51	\$21.50	M
19-3039	Psychologists, All Other	169	9.0%	92	\$42.72	\$17.39	M
29-1011	Chiropractors	109	2.4%	22	\$33.85	\$23.31	D
29-1021	Dentists, General	486	8.2%	147	\$78.09	\$48.13	D
29-1022	Oral and Maxillofacial Surgeons	59	4.6%	15	\$87.69	\$34.56	D
29-1023	Orthodontists	31	6.1%	8	\$81.54	\$49.92	D
29-1029	Dentists, All Other Specialists	35	9.9%	11	\$70.85	\$48.10	D
29-1031	Dietitians and Nutritionists	280	7.5%	121	\$24.43	\$17.42	B
29-1041	Optometrists	173	13.6%	57	\$67.44	\$43.73	D
29-1051	Pharmacists	1,391	3.5%	456	\$65.50	\$47.64	D
29-1061	Anesthesiologists	88	19.5%	37	\$93.58	\$64.46	D
29-1062	Family and General Practitioners	990	9.2%	300	\$99.01	\$55.00	D
29-1063	Internists, General	213	11.1%	70	\$101.29	\$49.71	D
29-1064	Obstetricians and Gynecologists	180	8.5%	53	\$106.12	\$60.34	D
29-1065	Pediatricians, General	109	14.6%	39	\$92.21	\$51.30	D
29-1066	Psychiatrists	176	7.3%	50	\$43.15	\$20.45	D
29-1067	Surgeons	122	16.4%	47	\$104.50	\$27.09	D
29-1069	Physicians and Surgeons, All Other	1,567	11.5%	509	\$119.85	\$56.21	D
29-1071	Physician Assistants	691	18.7%	348	\$48.16	\$35.90	M
29-1081	Podiatrists	84	0.7%	25	\$42.39	\$28.01	D
29-1122	Occupational Therapists	576	8.6%	226	\$38.02	\$24.23	M
29-1123	Physical Therapists	1,090	10.0%	405	\$39.10	\$27.86	D
29-1124	Radiation Therapists	122	5.2%	42	\$31.11	\$22.31	A
29-1125	Recreational Therapists	110	5.3%	41	\$19.98	\$15.17	B
29-1126	Respiratory Therapists	526	9.9%	212	\$27.33	\$19.91	A
29-1127	Speech-Language Pathologists	559	6.8%	212	\$36.55	\$24.06	M
29-1128	Exercise Physiologists	75	4.4%	28	\$17.42	\$11.79	B
29-1129	Therapists, All Other	39	12.3%	18	\$31.67	\$19.74	B



Occupational Profiles – Medical, cont'd

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US	ENTRY WAGE VERSUS US	TYPICAL EDUCATION
29-1131	Veterinarians	518	10.6%	178	\$41.36	\$30.07	D
29-1141	Registered Nurses	13,742	7.9%	5,505	\$28.92	\$20.07	A
29-1151	Nurse Anesthetists	219	10.1%	76	\$68.44	\$49.70	M
29-1161	Nurse Midwives	29	10.4%	12	\$42.27	\$36.12	M
29-1171	Nurse Practitioners	946	19.2%	485	\$47.56	\$36.79	M
29-1181	Audiologists	92	8.2%	34	\$37.48	\$29.38	D
29-1199	Health Diagnosing and Treating Prac...	108	18.9%	49	\$34.58	\$20.78	M
29-2018	Clinical Laboratory Technologists a...	1,809	6.3%	706	\$24.72	\$13.18	A
29-2021	Dental Hygienists	1,272	6.9%	532	\$33.56	\$20.55	A
29-2031	Cardiovascular Technologists and Te...	470	3.7%	164	\$28.35	\$16.50	A
29-2032	Diagnostic Medical Sonographers	298	12.3%	133	\$29.87	\$21.62	A
29-2033	Nuclear Medicine Technologists	184	4.0%	64	\$33.06	\$25.08	A
29-2034	Radiologic Technologists	1,193	6.6%	454	\$25.96	\$18.93	A
29-2035	Magnetic Resonance Imaging Technolo...	158	8.0%	63	\$33.74	\$26.17	A
29-2041	Emergency Medical Technicians and P...	1,665	17.0%	812	\$15.83	\$11.27	C
29-2051	Dietetic Technicians	82	6.6%	40	\$14.33	\$10.09	A
29-2052	Pharmacy Technicians	2,266	5.0%	1,051	\$13.48	\$9.56	C
29-2053	Psychiatric Technicians	650	1.5%	279	\$13.50	\$10.59	C
29-2054	Respiratory Therapy Technicians	23	-19.9%	4	\$18.54	\$11.21	A
29-2055	Surgical Technologists	731	4.5%	336	\$22.76	\$15.85	C
29-2056	Veterinary Technologists and Techni...	341	16.4%	203	\$16.08	\$12.39	A
29-2057	Ophthalmic Medical Technicians	534	8.8%	272	\$14.86	\$9.94	C
29-2061	Licensed Practical and Licensed Voc...	4,669	6.4%	1,974	\$18.75	\$14.67	C
29-2071	Medical Records and Health Informat...	1,044	8.6%	447	\$15.36	\$11.20	C
29-2081	Opticians, Dispensing	336	11.9%	173	\$20.19	\$14.11	HS
29-2091	Orthotists and Prosthetists	32	11.7%	14	\$42.97	\$24.62	M
29-2092	Hearing Aid Specialists	36	13.6%	17	\$22.91	\$14.87	C
29-2099	Health Technologists and Technician...	487	11.4%	217	\$22.87	\$13.84	C
29-9011	Occupational Health and Safety Spec...	736	5.0%	256	\$30.94	\$18.82	B
29-9012	Occupational Health and Safety Tech...	91	4.5%	32	\$21.38	\$14.31	HS



Occupational Profiles - Medical

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US	ENTRY WAGE VERSUS US	TYPICAL EDUCATION
29-9091	Athletic Trainers	123	9.4%	48	\$19.97	11%	B
29-9092	Genetic Counselors	4	0.0%	1	\$0.00		M
29-9099	Healthcare Practitioners and Techni...	205	8.3%	79	\$13.49	46%	B
31-1011	Home Health Aides	2,327	32.6%	2,567	\$9.84	12%	C
31-1013	Psychiatric Aides	206	4.8%	159	\$14.53	11%	C
31-1014	Nursing Assistants	8,919	3.9%	6,671	\$12.82	3%	C
31-1015	Orderlies	169	3.8%	127	\$11.81	10%	HS
31-2011	Occupational Therapy Assistants	169	10.8%	128	\$29.72	4%	A
31-2012	Occupational Therapy Aides	102	4.8%	69	\$15.45	10%	C
31-2021	Physical Therapist Assistants	592	10.2%	465	\$28.06	2%	A
31-2022	Physical Therapist Aides	439	6.9%	327	\$10.65	14%	C
31-9011	Massage Therapists	508	10.1%	369	\$15.65	19%	C
31-9091	Dental Assistants	1,827	7.3%	1,392	\$17.42	4%	C
31-9092	Medical Assistants	2,927	17.3%	2,608	\$14.42	8%	C
31-9093	Medical Equipment Preparers	349	4.1%	270	\$13.64	20%	C
31-9094	Medical Transcriptionists	614	5.4%	439	\$16.26	4%	C
31-9095	Pharmacy Aides	204	-2.1%	163	\$10.64	15%	C
31-9096	Veterinary Assistants and Laborator...	640	10.4%	751	\$11.51	8%	C
31-9097	Phlebotomists	958	10.3%	703	\$15.51	4%	C
31-9099	Healthcare Support Workers, All Oth...	364	10.4%	312	\$20.11	12%	C



Occupational Profiles – Plant Operators

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US	ENTRY WAGE VERSUS US	TYPICAL EDUCATION
51-8011	Nuclear Power Reactor Operators	20	-7.3%	9	\$49.53	\$32.27	C
51-8012	Power Distributors and Dispatchers	84	-1.7%	43	\$35.92	\$22.86	C
51-8013	Power Plant Operators	108	-1.1%	57	\$26.59	\$15.76	C
51-8021	Stationary Engineers and Boiler Ope...	253	2.3%	169	\$21.96	\$16.19	HS
51-8031	Water and Wastewater Treatment Plan...	498	0.8%	264	\$20.68	\$13.55	HS
51-8091	Chemical Plant and System Operators...	62	4.1%	42	\$23.89	\$12.41	HS
51-8092	Gas Plant Operators	60	4.2%	40	\$34.50	\$22.76	HS
51-8093	Petroleum Pump System Operators, Re...	26	12.8%	21	\$25.48	\$16.92	HS
51-8099	Plant and System Operators, All Oth...	45	7.5%	32	\$27.97	\$16.89	HS
51-9011	Chemical Equipment Operators and Te...	102	7.3%	73	\$16.09	\$12.48	HS



Occupational Profiles - Production

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US	ENTRY WAGE VERSUS US	TYPICAL EDUCATION
11-3051	Industrial Production Managers	532	4.3%	249	\$50.94	\$32.95	B
51-1011	First-Line Supervisors of Productio...	3,206	2.5%	2,006	\$31.47	\$19.13	C
51-2011	Aircraft Structure, Surfaces, Riggi...	16	22.4%	16	\$23.02	\$12.80	C
51-2021	Coil Winders, Tapers, and Finishers...	16	14.8%	13	\$15.90	\$9.11	HS
51-2028	Electrical, Electronic, and Electro...	789	-0.7%	490	\$15.43	\$9.67	C
51-2031	Engine and Other Machine Assemblers...	73	-0.4%	48	\$18.08	\$10.83	C
51-2041	Structural Metal Fabricators and Fi...	939	-8.1%	443	\$20.40	\$13.69	C
51-2091	Fiberglass Laminators and Fabricato...	136	4.9%	112	\$12.64	\$8.73	C
51-2093	Timing Device Assemblers and Adjust...	4	0.0%	2	\$0.00	\$0.00	C
51-2098	Assemblers and Fabricators, All Oth...	2,970	-1.2%	2,060	\$14.22	\$9.82	C
51-3011	Bakers	626	6.2%	581	\$10.40	\$7.46	<HS
51-3021	Butchers and Meat Cutters	397	8.9%	340	\$15.43	\$10.64	<HS
51-3022	Meat, Poultry, and Fish Cutters and...	1,800	-1.1%	1,341	\$12.55	\$9.68	<HS
51-3023	Slaughterers and Meat Packers	592	-2.0%	438	\$11.15	\$9.17	<HS
51-3091	Food and Tobacco Roasting, Baking, ...	80	-0.8%	58	\$10.48	\$7.96	<HS
51-3092	Food Batchmakers	326	1.2%	275	\$12.22	\$9.23	HS
51-3093	Food Cooking Machine Operators and ...	69	5.1%	56	\$11.72	\$8.86	HS
51-3099	Food Processing Workers, All Other	343	0.5%	228	\$11.47	\$9.63	<HS
51-4011	Computer-Controlled Machine Tool Op...	243	8.3%	178	\$20.48	\$14.16	C
51-4012	Computer Numerically Controlled Mac...	53	11.1%	40	\$25.67	\$17.47	C
51-4021	Extruding and Drawing Machine Sette...	119	-3.8%	67	\$16.29	\$12.15	C
51-4022	Forging Machine Setters, Operators,...	48	0.0%	30	\$17.86	\$10.52	C
51-4023	Rolling Machine Setters, Operators,...	35	2.8%	23	\$17.67	\$9.89	C
51-4031	Cutting, Punching, and Press Machin...	358	-0.2%	229	\$15.46	\$9.44	C
51-4032	Drilling and Boring Machine Tool Se...	39	-2.7%	23	\$17.62	\$10.54	C
51-4033	Grinding, Lapping, Polishing, and B...	246	1.0%	166	\$17.12	\$11.09	C
51-4034	Lathe and Turning Machine Tool Sett...	34	2.8%	25	\$16.65	\$10.24	C
51-4035	Milling and Planing Machine Setters...	47	-2.3%	29	\$17.94	\$10.51	C
51-4041	Machinists	2,129	2.2%	1,423	\$23.74	\$16.02	C



Occupational Profiles – Production, cont'd

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US	ENTRY WAGE VERSUS US	TYPICAL EDUCATION
51-4051	Metal-Refining Furnace Operators an...	42	1.5%	30	\$20.61	4%	HS
51-4052	Pourers and Casters, Metal	33	-8.3%	17	\$17.02	7%	HS
51-4061	Model Makers, Metal and Plastic	30	1.4%	20	\$22.34	13%	HS
51-4062	Patternmakers, Metal and Plastic	15	-1.8%	9	\$19.73	9%	HS
51-4071	Foundry Mold and Coremakers	61	-7.1%	36	\$15.65	7%	HS
51-4072	Molding, Coremaking, and Casting Ma...	637	-6.4%	359	\$18.33	23%	HS
51-4081	Multiple Machine Tool Setters, Oper...	179	6.5%	131	\$9.40	44%	HS
51-4111	Tool and Die Makers	146	4.1%	98	\$29.55	17%	C
51-4121	Welders, Cutters, Solderers, and Br...	2,346	3.3%	1,728	\$23.55	22%	C
51-4122	Welding, Soldering, and Brazing Mac...	780	-4.4%	485	\$21.58	21%	C
51-4191	Heat Treating Equipment Setters, Op...	62	3.1%	42	\$16.29	9%	C
51-4192	Layout Workers, Metal and Plastic	496	-2.2%	314	\$24.19	9%	HS
51-4193	Plating and Coating Machine Setters...	87	11.3%	64	\$15.89	4%	C
51-4194	Tool Grinders, Filers, and Sharpene...	43	0.7%	29	\$15.98	9%	C
51-4199	Metal Workers and Plastic Workers, ...	79	3.4%	55	\$17.67	3%	HS
51-5111	Prepress Technicians and Workers	81	2.8%	63	\$16.07	16%	C
51-5112	Printing Press Operators	660	6.4%	470	\$16.94	1%	HS
51-5113	Print Binding and Finishing Workers...	145	10.8%	124	\$16.58	8%	HS
51-6011	Laundry and Dry-Cleaning Workers	1,340	-3.3%	992	\$8.94	17%	<HS
51-6021	Pressers, Textile, Garment, and Rel...	253	-6.1%	165	\$9.51	12%	<HS
51-6031	Sewing Machine Operators	487	4.0%	384	\$10.74	8%	<HS
51-6041	Shoe and Leather Workers and Repair...	32	-6.5%	18	\$11.29	8%	HS
51-6042	Shoe Machine Operators and Tenders	4	0.0%	3	\$0.00		HS
51-6051	Sewers, Hand	15	3.6%	11	\$12.30	2%	<HS
51-6052	Tailors, Dressmakers, and Custom Se...	103	-1.6%	70	\$10.18	26%	<HS
51-6061	Textile Bleaching and Dyeing Machin...	4	0.0%	3	\$0.00		HS
51-6062	Textile Cutting Machine Setters, Op...	35	1.7%	26	\$11.62	10%	HS
51-6063	Textile Knitting and Weaving Machin...	48	-36.0%	10	\$13.37	1%	HS



Occupational Profiles – Production, cont'd

CODE	OCCUPATION	'17 JOB BASE	----- PROJECTED -----		ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US		ENTRY WAGE VERSUS US		TYPICAL EDUCATION
			% GROWTH '17 - '22							
51-6064	Textile Winding, Twisting, and Draw...	106	-15.5%	42	\$14.97	10%	\$10.73	5%	HS	
51-6091	Extruding and Forming Machine Sette...	51	-5.8%	36	\$16.66	4%	\$10.89	0%	HS	
51-6092	Fabric and Apparel Patternmakers	4	0.0%	3	\$0.00		\$0.00		HS	
51-6093	Upholsterers	222	1.3%	135	\$16.05	1%	\$10.13	0%	HS	
51-6099	Textile, Apparel, and Furnishings W...	226	-2.2%	169	\$14.68	14%	\$10.42	12%	HS	
51-7011	Cabinetmakers and Bench Carpenters	497	5.5%	335	\$20.02	23%	\$12.34	17%	HS	
51-7021	Furniture Finishers	39	3.0%	28	\$14.17	6%	\$8.87	14%	HS	
51-7031	Model Makers, Wood	12	-0.2%	8	\$22.39	7%	\$12.84	17%	HS	
51-7032	Patternmakers, Wood	4	0.0%	2	\$0.00		\$0.00		HS	
51-7041	Sawing Machine Setters, Operators, ...	47	17.8%	46	\$13.41	4%	\$9.46	4%	HS	
51-7042	Woodworking Machine Setters, Operat...	195	11.0%	166	\$13.79	2%	\$10.05	2%	HS	
51-7099	Woodworkers, All Other	44	3.3%	30	\$21.66	47%	\$18.50	95%	HS	
51-9012	Separating, Filtering, Clarifying, ...	175	4.0%	118	\$19.20	2%	\$12.75	8%	HS	
51-9021	Crushing, Grinding, and Polishing M...	195	-4.3%	117	\$19.49	15%	\$13.69	23%	HS	
51-9022	Grinding and Polishing Workers, Han...	166	-3.0%	107	\$16.00	15%	\$10.05	0%	<HS	
51-9023	Mixing and Blending Machine Setters...	132	3.9%	94	\$15.85	10%	\$10.57	6%	HS	
51-9031	Cutters and Trimmers, Hand	37	6.0%	29	\$12.00	12%	\$8.47	13%	<HS	
51-9032	Cutting and Slicing Machine Setters...	218	-2.4%	143	\$16.31	1%	\$11.24	4%	HS	
51-9041	Extruding, Forming, Pressing, and C...	296	-3.2%	172	\$17.34	7%	\$11.41	3%	HS	
51-9051	Furnace, Kiln, Oven, Drier, and Ket...	41	-0.8%	23	\$18.08	0%	\$10.86	8%	HS	
51-9061	Inspectors, Testers, Sorters, Sampl...	2,453	-1.7%	1,713	\$19.75	10%	\$11.00	1%	HS	
51-9071	Jewelers and Precious Stone and Met...	100	3.7%	66	\$17.72	3%	\$11.28	6%	HS	
51-9081	Dental Laboratory Technicians	177	2.3%	128	\$24.03	29%	\$13.32	19%	HS	
51-9082	Medical Appliance Technicians	32	9.2%	26	\$20.56	15%	\$12.72	13%	HS	
51-9083	Ophthalmic Laboratory Technicians	194	9.0%	154	\$14.82	0%	\$9.08	13%	HS	
51-9111	Packaging and Filling Machine Opera...	1,582	2.3%	1,134	\$17.43	24%	\$10.10	3%	HS	
51-9121	Coating, Painting, and Spraying Mac...	289	9.1%	219	\$19.77	22%	\$12.97	17%	HS	
51-9122	Painters, Transportation Equipment	877	3.8%	619	\$21.98	9%	\$13.08	2%	HS	
51-9123	Painting, Coating, and Decorating W...	53	3.3%	35	\$15.13	2%	\$9.60	5%	<HS	



Occupational Profiles – Production, cont'd

----- PROJECTED -----

CODE	OCCUPATION	'17 JOB BASE	% GROWTH '17 - '22	ANNUAL JOB OPENINGS	MEDIAN WAGE VERSUS US	ENTRY WAGE VERSUS US	TYPICAL EDUCATION
51-9141	Semiconductor Processors	38	19.8%	36	\$15.83	□ 10%	A
51-9151	Photographic Process Workers and Pr...	178	-9.2%	155	\$10.95	□ 17%	HS
51-9191	Adhesive Bonding Machine Operators ...	153	1.5%	105	\$15.35	□ 2%	HS
51-9192	Cleaning, Washing, and Metal Pickli...	36	3.4%	23	\$11.66	□ 19%	<HS
51-9193	Cooling and Freezing Equipment Oper...	43	-0.9%	29	\$13.15	□ 11%	HS
51-9194	Ethers and Engravers	44	5.7%	32	\$17.93	□ 21%	HS
51-9195	Molders, Shapers, and Casters, Exce...	180	-5.8%	89	\$15.76	□ 3%	HS
51-9196	Paper Goods Machine Setters, Operat...	306	-7.8%	159	\$16.42	□ 10%	HS
51-9197	Tire Builders	35	8.5%	29	\$21.71	□ 12%	HS
51-9198	Helpers--Production Workers	949	9.2%	973	\$12.92	□ 3%	<HS
51-9199	Production Workers, All Other	1,272	3.9%	930	\$12.42	□ 11%	HS

Occupational Profiles – Social Services



Occupational Profiles – Social Services, cont'd



07

**Education
Infrastructure
Analysis**

Education Infrastructure Analysis: Focus Areas

Production	Precision Production & Skilled Trades	CNC	Engineering	Engineering Technologies	Architectural/ Construction Engineering Technologies
		Electrician			Civil Engineering Technologies/Technicians
		Forklift Training			Computer Engineering Technology
		HVAC			Drafting and Design
		Machining			Electrical or Computer Engineering Technology
		Machinist			Engineering and Technology
		Pipefitter			Engineering Technology, General
		Welding			Environmental Control Tech
		Mechanic & Repair Technologies			Autobody/Collision and Repair Tech
	Automotive Mechanics Tech			Mechanical Engineering Tech	
	Avionics Maintenance Tech			Mechatronics	
	Diesel Mechanics Tech			Aerospace, Aeronautical and Astronautical Engineering	
	Industrial Equipment Maintenance			Bio/Biomedical Engineering, Biotechnology	
	Maintenance, Installation, and Repair			Chemical Engineering	
	Marine Maintenance/Engine Tech			Civil Engineering	
	Medium/Heavy Vehicle and Truck Tech			Computer Engineering	
	Production/Process Development			Electrical or Computer Engineering	
	Small Engine Mechanics and Repair Tech	Engineering Management			
	Engineering Technologies	Industrial Production Tech		Engineering, General	Engineering
		Mechanical Engineering			
	Mechatronics	Mathematics, Statistics, & Economics	Applied Mathematics		

Education Infrastructure Analysis: Focus Areas

Transportation and Logistics	Business Operations	Logistics and Supply Chain
		Purchasing and Procurement
		Transportation/Mobility Management
	Transportation	Air Transportation (e.g. pilot)
		Ground Transportation (CDL- Commercial Drivers License)
		Marine Transportation
	Mechanic & Repair Technologies	Unmanned Aircraft
		Avionics Maintenance Tech
		Diesel Mechanics Tech
		Marine Maintenance/Engine Tech
		Medium/Heavy Vehicle and Truck Tech

Business Services & Operations	Accounting and Finance	Accounting
		Accounting and Finance
		Actuary
		Bookkeeping
		Finance
	Business Administration and Management	Business Administration and Management
		Entrepreneurship and Small Business Management
		Leadership
	Business/ Administrative Support	Business/Administrative Support
		Customer Service, Call Center Management
	Human Resources	Human Resources
	Logistics	Logistics and Supply Chain
		Purchasing and Procurement
	Marketing	Marketing (incl. Digital Marketing)
	Mathematics, Statistics, & Economics	Analytics and Data Science
		Economics

Info Tech & Analysis	Computer & Information Sciences	Computer Science
		Computer Support Specialist
		Information Science
		Information Technology
	Computer Security & Forensics	Cybercrime/Cyber Operations/Cyber Policy
		Cybersecurity/Network Security/Forensics
		Information Assurance
	Business Operations	Analytics and Data Science
		Management Information Systems
		Marketing (incl. Digital Marketing)
		Technology Management
	Computer Programming, Software & Web Design	Computer Programming/Programmer, General
		Web Page and Digital Design
	Mathematics, Statistics, & Economics	Applied Economics
		Applied Mathematics
		Database Management
	Computer Systems & Networking	Geographic Information Systems
		Computer Systems Networking
	Engineering	Network and System Administration
Computer Engineering		
Engineering Technologies	Electrical or Computer Engineering	
	Computer Engineering Technology	
	Electrical or Computer Engineering Technology	
Health Technology	Health Information Technology	
		Mechatronics

08

**Select
Completions &
Credentialing
Data**

Career Pathways Completions

Career Cluster	Career Plan of Study	Total	Poquoson	Accomack*	Chesapeake	Isle of Wight	Norfolk	S-hampton	Suffolk*	VA Beach	Will-James	Franklin City*	Hampton City*	Newport News*	Portsmouth*	York*
Manufacturing	Health, Safety, and Environmental Assurance															
Manufacturing	Logistics and Inventory Control															
Manufacturing	Maintenance, Installation, and Repair	70			7	1	7	5		50						
Manufacturing	Manufacturing Production Process Development	75	1		60	12					2					
Manufacturing	Production	177	3		14		4	2	42	112						
Manufacturing	Quality Assurance															
Ag/Food/Natural Resources	Agribusiness Systems	33	1			12				6					14	
Ag/Food/Natural Resources	Animal Systems	25	3			2					6					14
Ag/Food/Natural Resources	Environmental Service Systems	4						4								
Ag/Food/Natural Resources	Food Products and Processing Systems															
Ag/Food/Natural Resources	Natural Resources Systems	3						3								
Ag/Food/Natural Resources	Plant Systems	25				19		6								
Ag/Food/Natural Resources	Power, Structural and Technical Systems															
Architecture and Construction	Construction	129			69	5		5		32	3			15		
Architecture and Construction	Design/Pre-Construction	250	5		10			1		104	29		16		15	70
Architecture and Construction	Maintenance and Operations	28	2				13	3		5	5					
Arts, AV and Comm	Audio and Video Technology and Film	40			13		1							26		
Arts, AV and Comm	Journalism and Broadcasting	25			11					14						
Arts, AV and Comm	Performing Arts															
Arts, AV and Comm	Printing Technology	42			31				11							
Arts, AV and Comm	Telecommunications	9								9						
Arts, AV and Comm	Visual Arts	155	1		59		19			53			23			
Biz Mgt and Admin	Administrative Support	69		18			1		36							14
Biz Mgt and Admin	Business Information Management	278	1	12	88				29	123	1					24
Biz Mgt and Admin	General Management	199		32	19		2			89	22		24			11
Biz Mgt and Admin	Human Resources Management															
Biz Mgt and Admin	Operations Management	3	2							1						
Education & Training	Administration and Administrative Support															
Education & Training	Professional Support Services	1	1													
Education & Training	Teaching and Training	163	5		44		8	12		78	4				12	
Finance	Accounting	60			30		1			29						
Finance	Banking Services															
Finance	Business Finance															
Finance	Insurance															
Finance	Securities and Investments															
Total Completions by District		7,816	79	141	1,536	425	951	92	330	2,116	214	48	767	605	260	252

*Data sourced from the Virginia Department of Education does not include completion numbers for plans of study with less than 10 completers. This source was only used when data was provided by the school district.



Career Pathways Completions

Career Cluster	Career Plan of Study	Total	Poquoson	Accomack*	Chesapeake	Isle of Wight	Norfolk	S-hampton	Suffolk*	VA Beach	Will-James	Franklin City*	Hampton City*	Newport News*	Portsmouth *	York*
Gov't & Public Admin	Foreign Service															
Gov't & Public Admin	Governance	1					1									
Gov't & Public Admin	National Security	966	1		177	99	204		76	153		48	124		84	
Gov't & Public Admin	Planning															
Gov't & Public Admin	Public Management and Administration															
Gov't & Public Admin	Regulation	1	1													
Gov't & Public Admin	Revenue and Taxation															
Health Science	Biotechnology Research and Development	77							14		9		54			
Health Science	Diagnostics Services	27	2								5				20	
Health Science	Health Informatics	33	2								7					24
Health Science	Support Services	40	2							12				26		
Health Science	Therapeutic Services	252	3		50	25	66				4		41	23	18	22
Hospitality & Tourism	Lodging	4								4						
Hospitality & Tourism	Recreation, Amusements and Attractions	37	3			21				10	3					
Hospitality & Tourism	Restaurants and Food and Beverage Services	895	1		180	61	150	18	12	341			38	70	24	
Hospitality & Tourism	Travel and Tourism	19			19											
Human Services	Consumer Sciences	44		18				4	22							
Human Services	Counseling and Mental Health Services	3				3										
Human Services	Early Childhood Development Services	319			16			5		203			95			
Human Services	Family and Community Services	128			17				24	9	12		66			
Human Services	Personal Care Services	264	9		145	4	14	9	16	37	4			26		
Information Technology	Information Support and Services	390	5		13	4	156	2		125	18		11	31		25
Information Technology	Network Systems	156	1		21	35				49	3		36			11
Information Technology	Programming and Software Development	110	5		13	38	7			17	1		29			
Information Technology	Web and Digital Communications	112			44		42	1			8		17			
Law/Corrections/Security	Corrections Services															
Law/Corrections/Security	Emergency and Fire Management Services	50	2		23		5			18	2					
Law/Corrections/Security	Law Enforcement Services	54	1								2		16	18		17
Law/Corrections/Security	Legal Services	18	1		17											
Law/Corrections/Security	Security and Protective Services	14					14									
Marketing	Marketing Communications	12			11		1									
Marketing	Marketing Management	393	5		31		41		25	130	6		51	38	13	53
Marketing	Marketing Research															
Marketing	Merchandising	240			84		17			136	3					
Marketing	Professional Sales	96		28	25									43		
STEM	Engineering and Technology	903	8	33	160	84	165	7	23	119	53		114	110	11	16
STEM	Science and Mathematics	21			16			5								
Trans/Distr/Logistics	Facility and Mobile Equipment Maintenance	60	2		19		12				2		12	13		
Trans/Distr/Logistics	Logistics Planning and Management Services															
Trans/Distr/Logistics	Transportation Operations	214								48				166		
Trans/Distr/Logistics	Transportation Systems/Infrastructure Planning, Mgt															
Trans/Distr/Logistics	Warehousing and Distribution Center Operations															
Total Completions by District		7,816	79	141	1,536	425	951	92	330	2,116	214	48	767	605	260	252

*Data sourced from the Virginia Department of Education does not include completion numbers for plans of study with less than 10 completers. This source was only used when data was provided by the school district.



Distance Learning Enrollment

Institution	Total Enrollment	Full-Time Distance Learning Students, TOTAL	Full-Time Distance Learning Students, IN-STATE ONLY	Full-Time Distance Learning Students, Out-of-State as % of Total Enrollment
Regent University	9,488	7,224	2,765	47.0%
Virginia Beach Theological Seminary	34	12	4	23.5%
ECPI University	11,972	2,779	886	15.8%
Bethel College	39	8	6	5.1%
Hampton University	4,618	240	9	5.0%
Eastern Virginia Medical School	1,256	132	87	3.6%
Old Dominion University	24,375	5,674	4,888	3.2%
Sentara College of Health Sciences	440	202	193	2.0%
College of William and Mary	8,740	338	167	2.0%
Tidewater Community College	22,776	3,698	3,564	0.6%
Norfolk State University	5,303	280	260	0.4%
Bryant & Stratton College-Hampton	303	23	22	0.3%
Thomas Nelson Community College	8,286	1,206	1,183	0.3%
Paul D Camp Community College	1,404	213	210	0.2%
Virginia Wesleyan University	1,470	42	40	0.1%
Bryant & Stratton College-Virginia Beach	484	15	15	0.0%
Eastern Shore Community College	644	22	22	0.0%



Credential Data by Occupational Subcluster

Occupational Cluster	Occupation SubCluster	Credentials Earned
Agriculture	Animal Breeders	17
Agriculture	Farm Workers	101
Agriculture	Farm and Greenhouse Managers	135
Agriculture	Forest and Conservation Technicians	82
Agriculture	Groundskeeper Managers	60
Business/Financial/Back Office	Accounting Support	137
Business/Financial/Back Office	Financial Advisors	97
Business/Financial/Back Office	Executive/Admin. Assistants	12,831
Business/Financial/Back Office	Business/Financial/Back Office, All Other	138
Business/Financial/Back Office	Administrative Support Management	1,849
Communications/Mktg	Advertising & Sales Managers	94
Communications/Mktg	Telemarketing & Other Unskilled Sales	967
Construction	Carpenters	178
Construction	Electricians	76
Construction	HVAC	8,117
Construction	Building Inspectors	2
Construction	Building Maintenance	37
Construction	Concrete/Masonry	31
Construction	Plumbers & Pipefitters	25
Construction	Construction Trades, General	416
Design/Art	Design/Art, All Other	16
Design/Art	Graphic Designers	6,453
Design/Art	Interior Designers	6
Design/Art	Photographers	14
Design/Art	Visual Product Display	24
Design/Art	Film, Television, Radio & Video Production	109
Education	Child Care Workers	114
Education	Teacher Assistants	358
Education	Vocational Teachers, Post Secondary	10

Source: Data provided by regional education providers;
Analysis by Avalanche Consulting



Credential Data by Occupational Subcluster

Occupational Cluster	Occupation SubCluster	Credentials Earned
Hospitality	Bartenders	19
Hospitality	Hospitality Clerks	2,575
Hospitality	Restaurant Cooks	252
Hospitality	Cooks, Institutional	47
Hospitality	Cosmetologists / Hair Styling	221
Hospitality	Food Prep. & Serving Workers	563
Hospitality	Meeting and Event Planners	24
Hospitality	Restaurant Managers	42
Hospitality	Waiters and Attendants	5
Medical	Cardiovascular Technologists and Technicians	9
Medical	Dental Assistants	245
Medical	Emergency Medical Technicians and Paramedics	229
Medical	Fitness Trainers and Aerobics Instructors	15
Medical	Home Health Aides	135
Medical	Licensed Practical and Licensed Vocational Nurses	124
Medical	Medical Assistants	481
Medical	Medical and Clinical Laboratory Technologists	13
Medical	Medical Records and Health Information Technicians	92
Medical	Medical Secretaries	5
Medical	Nursing Aide	142
Medical	Occupational Therapy Aides	34
Medical	Pharmacists	1
Medical	Pharmacy Technicians	3,323
Medical	Phlebotomists	58
Medical	Nuclear Medicine / Radiologic Technologists	1
Medical	Veterinary Assistants and Laboratory Animal Caretakers	147
Medical	Veterinary Technologists and Technicians	5
Medical	Animal Trainers & Caretakers	2
Personal Services	Estheticians / Skin Care	2
Personal Services	Personal Services, All Other	11

Source: Data provided by regional education providers;
Analysis by Avalanche Consulting



Credential Data by Occupational Subcluster

Occupational Cluster	Occupation SubCluster	Credentials Earned
Production/Manufacturing	Auto Mechanics	3,346
Production/Manufacturing	Auto Body Repair	72
Production/Manufacturing	Heavy Vehicle Mechanics (not Aero)	25
Production/Manufacturing	Food Processing Operator	41
Production/Manufacturing	General Assemblers and Fabricators	6
Production/Manufacturing	Production/Manufacturing, All Other	29
Production/Manufacturing	General Machinist	291
Production/Manufacturing	Industrial Production Technicians	88
Production/Manufacturing	Small Engine Mechanics	280
Production/Manufacturing	Welders	865
Production/Manufacturing	Woodworkers & Furniture Makers	11
Real Estate	Real Estate & Facilities Managers	17
Science & Engineering	Architectural and Civil Drafters & Technicians	958
Science & Engineering	Cartographers & Surveyors	5
Science & Engineering	Electrical / Electronics Technicians & Drafters	152
Science & Engineering	Electrical & Electronics Repairers	30
Science & Engineering	Science & Engineering, All Other	126
Science & Engineering	Industrial Engineering Technicians	15
Science & Engineering	Computer Installers & Repairers	1,739
Science & Engineering	Mechanical Engineering Technicians	7
Social Services	Emergency Management Specialists	4
Social Services	Emergency Dispatch	36
Social Services	Fire Fighters	38
Social Services	Health Educators	6
Social Services	Law Enforcement & Protective Services	180
Social Services	Social Services	49
Software & IT	Computer Support Specialists	4,996
Software & IT	Web Developers	43
Transportation & Logistics	Logistics Clerks	47
Transportation & Logistics	Truck & Commercial Drivers	183
Transportation & Logistics	Transportation & Logistics, All Other	12
Military	Military, All (includes National Security/ROTC)	291

Source: Data provided by regional education providers;
Analysis by Avalanche Consulting

