



JOBS e Q

Perkins V Report

Strengthening Career & Technical Education

in Washington-Arlington-Alexandria, DC-VA-MD-WV
MSA



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About this Report 3

Industry Growth Forecasts 4

Industry Forecasts Including Retirement Demand 5

Detailed Industry Projections..... 6

Career Cluster Growth Forecasts 7

Career Cluster Forecasts Including Retirement Demand..... 8

Detailed Occupation Projections..... 9

Top Employers Advertising for Jobs 10

Top Skills in Demand for Job Ads 11

Top Skill and Certification Gaps 12

Regional Colleges and Universities 13

Washington-Arlington-Alexandria, DC-VA-MD-WV MSA Regional Map 14

Data Notes..... 15

Region Definition..... 16

FAQs 17



About this Report

The education industry supplies human capital to all industries. This report takes a macroeconomic view of the industries and the occupations that currently underpin the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA economy. Knowing what skills and occupations local employers need now and in the future will help the education community better anticipate curriculum that prepares students for those job openings.

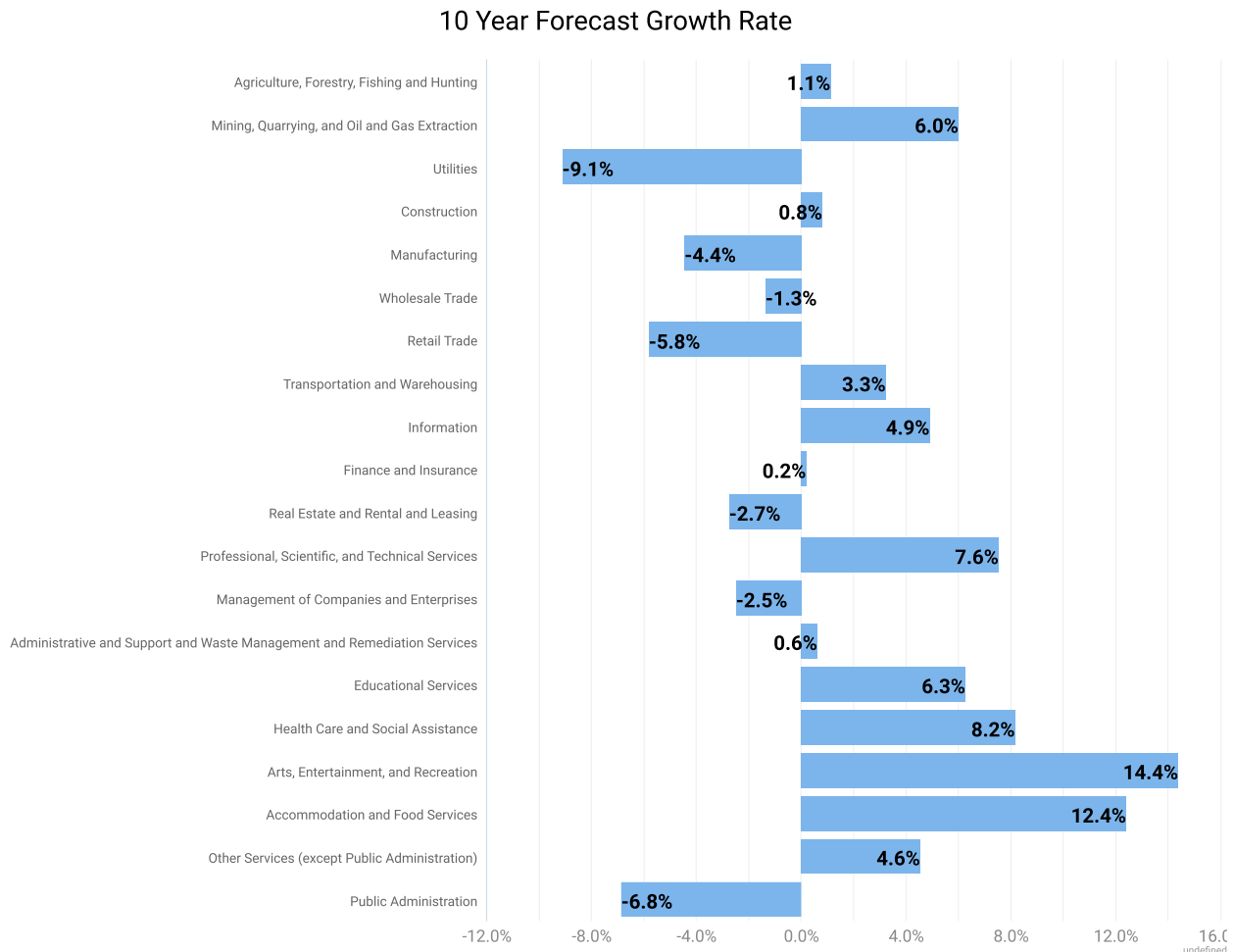
This report is designed to help educators who want to move beyond compliance and use Perkins V to make a real difference in their students' education. It provides actionable labor market intelligence—one of the Comprehensive Local Needs Assessment's (CLNA's) six requirements to bridge secondary education students to skilled jobs that employers need in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.

Industry Growth Forecasts

To help high school students select careers, educators can show them the earnings potential and the job opportunities across all industries today and in the future.

Employers can be categorized into one of 20 major industry sectors. The chart below shows the net job growth forecast for these sectors in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.

As of the fourth quarter of 2022, the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA had 13 sectors forecast to have positive employment growth over the next ten years and 7 sectors projected to contract. Those growing include "Arts, Entertainment, and Recreation," "Accommodation and Food Services" and "Health Care and Social Assistance."



Industry Forecasts Including Retirement Demand

For an accurate assessment of future demand, the number of people retiring from an industry need to be taken into account. From that perspective, the "Professional, Scientific, and Technical Services," "Accommodation and Food Services" and "Health Care and Social Assistance" sectors are expected to have the highest annual job demand in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.

Sector	Employment	Avg Ann Wages	Ann Empl Growth	Ann Total Demand
Professional, Scientific, and Technical Services	554,877	\$137,946	4,057	54,024
Accommodation and Food Services	261,389	\$33,247	3,078	48,869
Health Care and Social Assistance	362,243	\$70,616	2,859	40,214
Public Administration	413,318	\$120,351	-2,921	38,073
Retail Trade	270,301	\$43,099	-1,613	36,530
Educational Services	285,607	\$66,889	1,747	29,956
Other Services (except Public Administration)	209,337	\$71,554	936	26,249
Administrative and Support and Waste Management and Remediation Services	203,767	\$62,787	130	24,815
Construction	193,209	\$73,191	160	19,055
Transportation and Warehousing	116,462	\$65,148	374	14,350
Arts, Entertainment, and Recreation	65,113	\$51,388	882	10,593
Finance and Insurance	94,532	\$157,992	19	8,905
Information	81,631	\$144,788	393	8,376
Manufacturing	61,665	\$95,497	-279	6,423
Real Estate and Rental and Leasing	60,245	\$91,106	-167	6,073
Wholesale Trade	55,286	\$119,965	-75	6,063
Management of Companies and Enterprises	43,167	\$197,741	-108	3,963
Utilities	10,423	\$123,300	-99	903
Agriculture, Forestry, Fishing and Hunting	6,862	\$29,127	8	882
Mining, Quarrying, and Oil and Gas Extraction	835	\$84,967	5	92
Total - All Industries	3,356,187	\$89,036	9,980	397,310

Detailed Industry Projections

Total employment in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA is forecast to increase 3.0% over the next ten years, compared with an expected growth rate of 5.5% in the nation over the same period.

At the detailed industry level, "Computer Systems Design and Related Services" and "Restaurants and Other Eating Places" are expected to experience the most job gains over this period.

Industry	Employment	Avg Ann Wages	Hist 10yr Change	Proj 10yr Growth
Computer Systems Design and Related Services	177,715	\$144,578	13,623	26,852
Restaurants and Other Eating Places	202,071	\$29,223	17,553	23,547
Management, Scientific, and Technical Consulting Services	123,094	\$137,553	19,508	10,125
Elementary and Secondary Schools	178,684	\$65,108	12,621	10,112
Individual and Family Services	32,781	\$44,373	10,671	9,247
Traveler Accommodation	33,669	\$54,096	-8,032	7,081
Home Health Care Services	32,667	\$38,364	12,129	5,302
Other Schools and Instruction	18,075	\$38,252	3,041	4,535
Other Professional, Scientific, and Technical Services	39,761	\$93,140	12,844	3,937
Other Personal Services	18,707	\$33,213	570	3,560

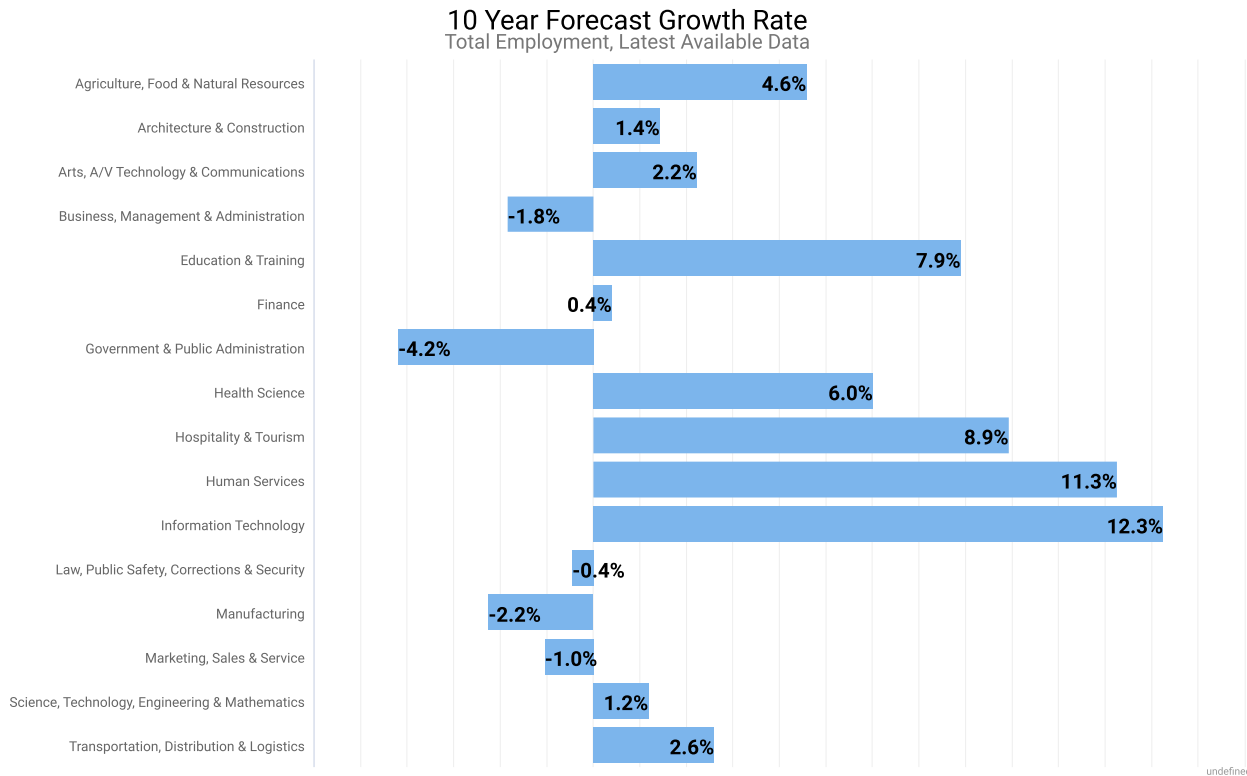
"Administration of Economic Programs " and "Grocery and Convenience Retailers " are projected to have the largest job declines in the region over the next ten years.

Industry	Employment	Avg Ann Wages	Hist 10yr Change	Proj 10yr Growth
Administration of Economic Programs	75,591	\$132,075	-2,123	-6,094
Grocery and Convenience Retailers	60,737	\$36,452	8,924	-5,752
Executive, Legislative, and Other General Government Support	98,343	\$98,829	9,392	-5,658
National Security and International Affairs	75,812	\$129,420	-1,640	-5,531
Administration of Human Resource Programs	57,834	\$133,953	5,352	-5,120
Justice, Public Order, and Safety Activities	82,054	\$121,970	1,480	-4,470
Newspaper, Periodical, Book, and Directory Publishers	11,677	\$122,737	-4,007	-2,306
Business, Professional, Labor, Political, and Similar Organizations	45,333	\$133,590	-1,623	-2,226
Printing and Related Support Activities	7,578	\$76,411	-2,168	-2,216
Health and Personal Care Retailers	18,633	\$44,913	728	-1,817

Career Cluster Growth Forecasts

With hundreds of occupations, it can be difficult for educators to pinpoint the most promising high-demand and high-wage occupations in their region that provide rewarding careers for their students. Analysis of the sixteen CTE Clusters provides an entryway into career pathways.

Of the sixteen career clusters, eleven are expected to expand employment in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA over the next ten years. Of those eleven, "Science, Technology, Engineering & Mathematics," "Information Technology," "Finance," "Health Science and "Arts, A/V Technology & Communications" pay more than the average occupation wage in the region (\$82,400).



Career Cluster Forecasts Including Retirement Demand

Similar to the analysis of industry employment growth, an accurate assessment of future occupation demand requires that the number of people retiring be taken into account as shown in the table below. In the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA, "Business, Management & Administration," "Hospitality & Tourism" and "Marketing, Sales & Service" clusters are expected to have the highest annual job demand.

"Science, Technology, Engineering & Mathematics" has the highest wages of the CTE Clusters followed by the "Information Technology" and "Finance" clusters.

Career Cluster	Employment	Avg Ann Wages	Job Ads	Ann Empl Growth	Ann Total Demand
Science, Technology, Engineering & Mathematics	93,685	\$131,200	11,865	112	7,160
Information Technology	218,931	\$125,000	41,204	2,546	18,417
Finance	138,583	\$109,700	11,719	56	11,747
Law, Public Safety, Corrections & Security	173,613	\$107,300	7,673	-76	16,324
Business, Management & Administration	731,750	\$95,700	54,276	-1,354	75,398
Health Science	251,819	\$93,400	37,729	1,478	22,688
Government & Public Administration	36,938	\$89,000	2,165	-158	3,197
Arts, A/V Technology & Communications	59,982	\$85,400	3,786	133	6,346
Education & Training	217,433	\$81,400	13,448	1,661	22,021
Marketing, Sales & Service	329,699	\$72,100	27,629	-343	40,672
Agriculture, Food & Natural Resources	39,631	\$70,300	2,172	178	5,396
Architecture & Construction	214,041	\$66,200	6,636	307	21,328
Manufacturing	129,975	\$64,000	6,908	-295	13,305
Transportation, Distribution & Logistics	189,508	\$60,200	7,763	488	23,698
Human Services	159,842	\$51,900	11,964	1,714	23,168
Hospitality & Tourism	370,758	\$39,500	26,545	3,187	69,197
Total - All Occupations	3,356,187	\$82,400	273,482	9,980	380,406

Detailed Occupation Projections

There are over 800 defined occupations at the detailed level. Among those occupations that support a living wage, "Software Developers" and "Management Analysts" are expected to add the most jobs over the next ten years in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.

Occupation	Employment	Avg Ann Wages	Job Ads	Hist 10yr Change	Proj 10yr Growth
Software Developers	69,180	\$143,000	9,821	67,305	14,248
Management Analysts	61,835	\$120,100	6,191	-3,005	4,963
Information Security Analysts	11,885	\$138,100	4,281	4,323	3,840
General and Operations Managers	87,746	\$157,100	1,270	23,757	3,747
Market Research Analysts and Marketing Specialists	23,303	\$91,500	1,196	8,677	3,711
Computer Occupations, All Other	38,537	\$130,100	7,844	2,418	2,416
Software Quality Assurance Analysts and Testers	11,307	\$112,900	1,214	11,037	2,368
Financial Managers	20,109	\$183,000	2,354	2,164	2,234
Nurse Practitioners	4,211	\$131,200	744	1,857	2,001
Medical and Health Services Managers	8,884	\$148,700	4,921	1,812	1,993

Of occupations supporting a living wage, "Secretaries and Administrative Assistants, Except Legal, Medical, and Executive" and "Executive Secretaries and Executive Administrative Assistants" are projected to have the largest decline in employment over the next ten years.

Occupation	Employment	Avg Ann Wages	Job Ads	Hist 10yr Change	Proj 10yr Growth
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	45,170	\$52,400	3,820	-4,654	-5,551
Executive Secretaries and Executive Administrative Assistants	12,609	\$84,300	848	-23,679	-2,792
Bookkeeping, Accounting, and Auditing Clerks	31,608	\$57,400	1,043	-5,423	-2,325
Business Operations Specialists, All Other	76,518	\$107,600	5,424	31,796	-2,265
First-Line Supervisors of Retail Sales Workers	25,677	\$59,200	5,782	-2,442	-1,857
First-Line Supervisors of Office and Administrative Support Workers	29,166	\$79,200	2,398	-2,330	-1,472
Purchasing Agents, Except Wholesale, Retail, and Farm Products	10,525	\$94,900	283	-98	-1,312
Legal Secretaries and Administrative Assistants	4,946	\$78,300	56	-3,454	-1,168
Managers, All Other	39,135	\$157,900	607	17,112	-979
Computer Programmers	6,097	\$125,700	96	-13,235	-809

Top Employers Advertising for Jobs

This table identifies the twenty employers in the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA with the most online job ads over the last year for occupations that support a living wage. These employers should be considered candidates for stakeholder engagement groups.

Employer Name	Employers		Active Job Ads	% of Total	
	Active Job Ads	% of Total			
Leidos	10,088	1.1%			
Deloitte	8,913	1.0%			
SAIC	7,719	0.8%			
Booz Allen	7,465	0.8%			
Boeing	7,273	0.8%			
Allied universal	6,033	0.7%			
CAPITAL ONE	5,226	0.6%			
Guidehouse	5,086	0.6%			
General Dynamics Information Technology, Inc.,	5,081	0.6%			
Peraton	4,974	0.5%			
Fusion Medical Staffing	4,059	0.4%			
NORTHROP GRUMMAN	3,921	0.4%			
ManTech International Corporation	3,704	0.4%			
University of Maryland College Park	3,546	0.4%			
BAE Systems	3,401	0.4%			
Prince William County Public Schools	3,360	0.4%			
MedStar Health	3,140	0.3%			
American Medical Staffing	3,106	0.3%			
CACI International Inc	2,910	0.3%			
Amazon.com Services LLC	2,902	0.3%			

Top Skills in Demand for Job Ads

Below are the top 10 hard and soft required by employers in online job ads over the last year for occupations which support a living wage within the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA.

Hard Skills

Skill Name	Active Job Ads	
Microsoft Excel	127,315	
Microsoft Office	122,421	
Agile	70,283	
Microsoft PowerPoint	66,584	
Python	51,443	
Structured Query Language (SQL)	47,434	
JavaScript	47,138	
Amazon Web Services (AWS)	46,512	
Computer Programming/Coding	44,692	
Microsoft Word	44,443	

Soft Skills

Skill Name	Active Job Ads	
Communication (Verbal and written skills)	504,842	
Cooperative/Team Player	328,655	
Problem Solving	141,216	
Organization	136,261	
Detail Oriented/Meticulous	126,867	
Supervision/Management	126,451	
Self-Motivated/Ability to Work Independently/Self Leadership	124,232	
Analytical	124,057	
Customer Service	122,230	
Interpersonal Relationships/Maintain Relationships	114,469	

Top Skill and Certification Gaps

Below are the top 10 skill and certification gaps (supply shortfalls) among occupations which support a living wage within the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA. These data are based on online resumes and job ads that reflect local supply and demand.

Top 10 Skill Gaps in Washington-Arlington-Alexandria, DC-VA-MD-WV MSA

Name	Candidates	Openings	Gap
Microsoft SharePoint	3,775	4,294	-519
Linux	2,747	3,214	-467
Teaching/Training, Job	4,587	5,038	-451
Classroom Management	174	497	-322
Microsoft Azure	2,104	2,395	-291
Excavators	307	598	-290
System Integration	578	861	-283
Google	1,712	1,987	-275
Python	5,098	5,368	-271
Sales	4,895	5,161	-266

Top 10 Certification Gaps in Washington-Arlington-Alexandria, DC-VA-MD-WV MSA

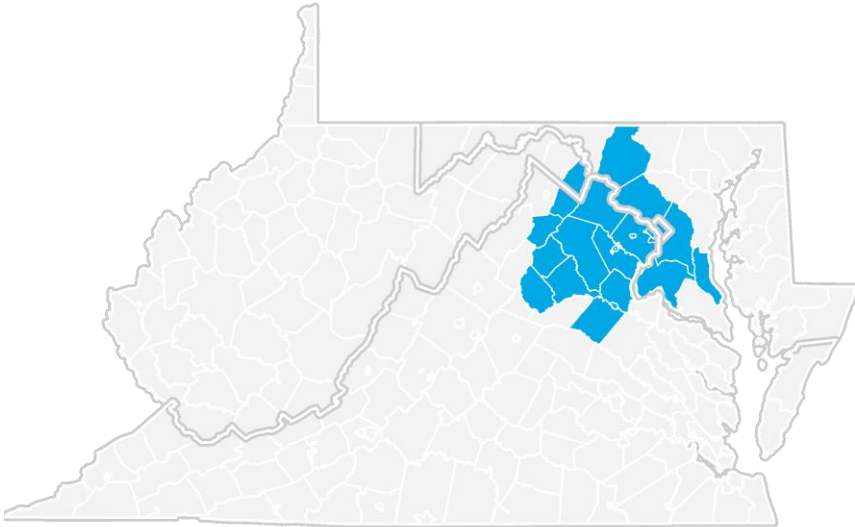
Name	Candidates	Openings	Gap
Secret Clearance	3,386	5,428	-2,042
OSHA 30	113	215	-102
Cisco Certified Network Associate (CCNA)	353	443	-89
Certified Public Accountant (CPA)	1,481	1,566	-86
Emergency Medical Technician - Basic (EMT-B)	70	148	-78
Certified Regulatory Compliance Manager (CRCM)	8	74	-65
GIAC Security Essentials Certification (GSEC)	52	114	-63
Class B Commercial Driver's License (CDL-B)	206	265	-59
Series 63	134	186	-52
Systems Security Certified Practitioner (SSCP)	55	106	-51

Regional Colleges and Universities

For students interested in advanced degrees, the list below provides the largest postsecondary schools within the Washington-Arlington-Alexandria, DC-VA-MD-WV MSA. The schools are sorted by enrollment size.

School	Certificates and 2yr Awards	4yr Awards	Total School Enrollment	Avg Net Price
University of Maryland Global Campus	3,050	8,170	58,526	\$16,228
Northern Virginia Community College	8,894	0	52,873	\$9,627
American Public University System	4,064	7,409	50,047	\$11,916
University of Maryland-College Park	56	9,118	40,709	\$17,146
George Mason University	0	7,228	38,541	\$18,841
George Washington University	62	4,144	27,017	\$31,240
Montgomery College	3,110	0	20,037	\$7,560
Georgetown University	12	2,121	19,371	\$23,049
American University	137	2,214	14,001	\$28,622
Prince George's Community College	1,341	0	11,357	\$14,291
Howard University	8	1,542	10,859	\$26,870
Strayer University-Global Region	358	999	10,457	\$22,776
Bowie State University	0	886	6,250	\$14,290
College of Southern Maryland	1,757	0	6,164	\$7,549
Frederick Community College	1,050	0	5,756	\$4,729
The Catholic University of America	10	893	5,366	\$35,520
Strayer University-Virginia	186	694	4,797	\$20,047
University of Mary Washington	21	1,101	4,293	\$21,901
University of the District of Columbia	205	378	3,725	\$12,354
Marymount University	0	580	3,294	\$26,717
Shepherd University	0	577	3,159	\$10,360
Strayer University-Maryland	142	313	2,760	\$21,401
Mount St. Mary's University	0	523	2,560	\$24,471
Hood College	8	356	2,042	\$23,755
Stratford University	140	312	1,947	\$23,243
Total	27,766	51,159	422,292	n/a

Washington-Arlington-Alexandria, DC-VA-MD-WV MSA Regional Map



Data Notes

- Industry employment and wages (including total regional employment and wages) are as of 2022Q4 and are based upon Bureau of Labor Statistics (BLS) QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including non-covered employment such as self-employed. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts.
- Occupation employment is as of 2022Q4 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS Occupation Employment and Wage Statistics (OEWS) data. Wages by occupation are as of 2022Q4, utilizing BLS OEWS data, imputed and brought forward by Chmura. Occupation employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts.
- Job ads data are online job posts from the Real-Time Intelligence (RTI) data set, produced wholly by Chmura and gleaned from over 40,000 websites. Data reflect ads active during the last twelve month period ending 04/26/2023 and advertised for any Zip Code Tabulation Area in or intersecting with the region for which this report was produced.
- For skill and certification gaps, openings and candidates are based upon regional occupation demand (growth plus separations) and the percent of skill demand and supply. Skill demand mix data are per a one-year sample of RTI data; skill supply data are estimated using a five-year sample of resumes data; both data sets compiled as of August 2021. Data may be based, at least in part, on data from broader geographies; see the Skill Gaps analytic export for more details.
- Postsecondary are per the National Center for Education Statistics. Awards and enrollment are for the 2020-2021 academic year and average net price data are for the 2020-2021 academic year.
- Figures may not sum due to rounding.

Region Definition

Washington-Arlington-Alexandria, DC-VA-MD-WV MSA is defined as the following counties:

Arlington County, Virginia

Clarke County, Virginia

Culpeper County, Virginia

Fairfax County, Virginia

Fauquier County, Virginia

Loudoun County, Virginia

Madison County, Virginia

Prince William County, Virginia

Rappahannock County, Virginia

Spotsylvania County, Virginia

Stafford County, Virginia

Warren County, Virginia

Alexandria City, Virginia

Fairfax City, Virginia

Falls Church City, Virginia

Fredericksburg City, Virginia

Manassas City, Virginia

Manassas Park City, Virginia

District of Columbia

Calvert County, Maryland

Charles County, Maryland

Frederick County, Maryland

Montgomery County, Maryland

Prince George's County, Maryland

Jefferson County, West Virginia

FAQs

How are industries and occupations defined?

Industries are defined via the North American Industry Classification System (NAICS). “Sectors” in this report represent 2-digit NAICS codes and industries in the “Industry Analysis” section of this report represent 4-digit NAICS codes. Occupations are defined via the Standard Occupational Classification System (SOC). Occupations in the “Occupation Analysis” section of this report represent 6-digit SOC codes. “CTE Clusters” are collections of 6-digit SOC occupations as defined through the National Career Clusters® Framework.

How is “Ann Total Demand” defined?

Annual total employment demand is forecast job demand that includes job needs due to growth, exits (such as retirements), and transfers (individuals moving from one career into another).

What is the Living Wage used in this report?

The living wage in the United States is \$24.16 per hour in 2021, before taxes for a family of four (two working adults, two children) - MIT Living Wage Calculator.