

Implementing Career Clusters:

- High-Skill
- High-Demand
- High-Wage Careers

Office of Career and Technical Education
Virginia Department of Education
August 25, 2016

Overview

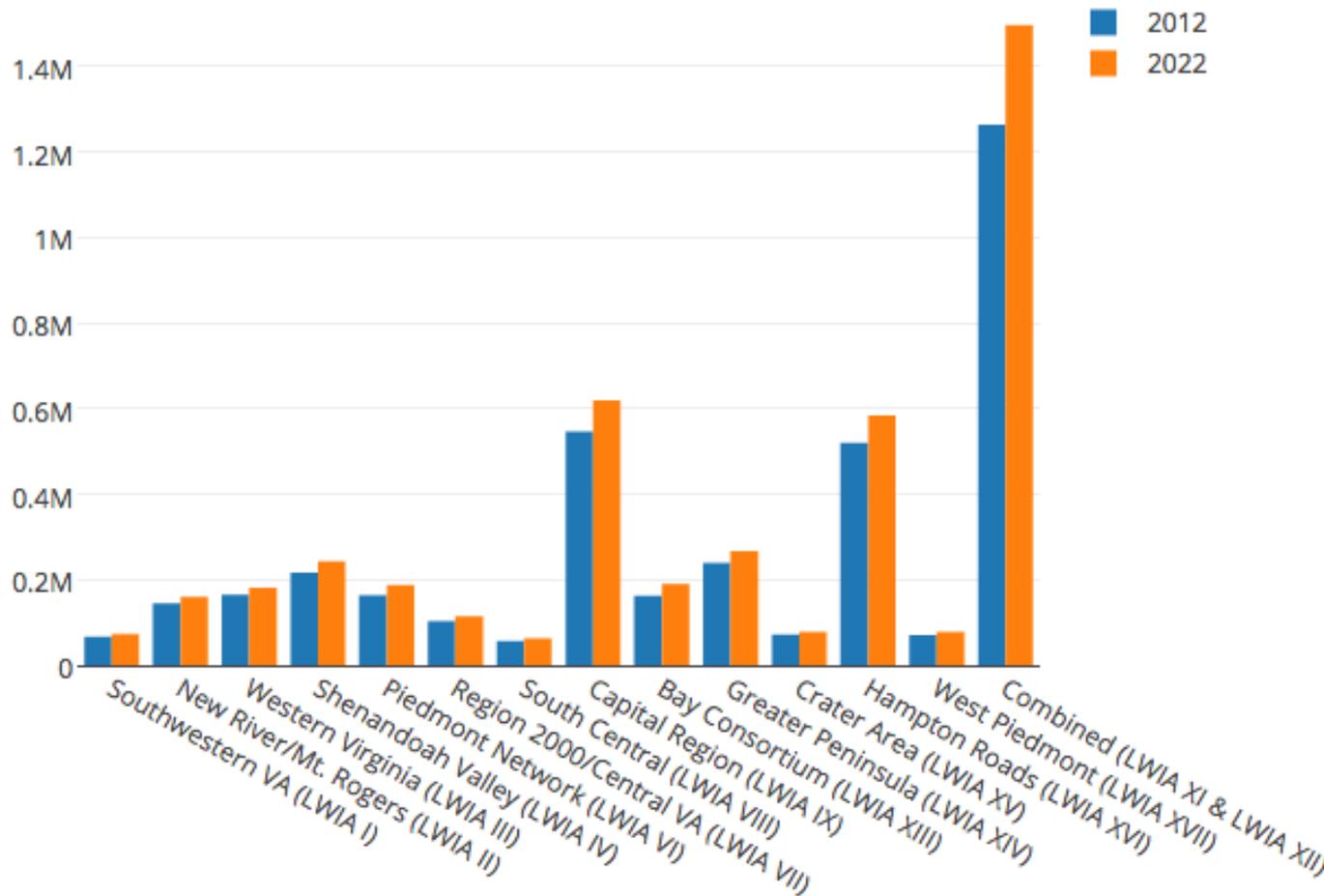
Part A: What data are available and where can data be found?

Part B: How can labor market data and career clusters be used to prepare students for high-skill, high-demand, and high-wage careers?

Part C: How can labor market data be used to complete the new CTE Course Application?

Part A: Finding the Data

ctetrailblazers.org/labor-market-data



Part A: Finding the Data

Virginia LMI (Labor Market Information)

<https://data.virginialmi.com>



The screenshot shows the Virginia LMI website homepage. At the top, it says "Virginia.gov Agencies | Governor" and "www.VirginiaLMI.com LMI labor market information". The main navigation menu includes "My Analyst Workspace", "Labor Market Profiles", and "Data Trends". The "Labor Market Profiles" menu is expanded, showing options for Area, Occupation, Industry, and Education profiles. The main content area is divided into three sections: "Labor Market Data", "Publications", and "Unemployment Rates - Press Release".

Labor Market Data
 Research labor market, economic and demographic data and compare information over time and between regions.
 Links: LMI Tools, Labor Force Data, Industry Data, Occupation Data, Demographic Data, Local Employment Dynamics, Download Center.
 Labor Market Analysis

Publications
 The Virginia Employment Commission produces several LMI-related publications. A few of them include:
 Links: Community Profiles, Economic Indicators, Business Indicators (NEW), The Forum, Career Guide 4 Virginia, LMI Store, Industry Profiles, Labor Force at a Glance.
 More

Unemployment Rates - Press Release

	Jun-16	May-16	Jun-15
Virginia	4.0%	3.6%	4.6%
seasonally adj.	3.7%	3.7%	4.4%
United States	5.1%	4.5%	5.5%
seasonally adj.	4.9%	4.7%	5.3%

Below the table is a line graph showing unemployment rates from Jun-15 to Jun-16. The y-axis ranges from 3.0 to 6.0. Two lines are shown: a red line for Virginia and a green line for the United States. Both lines show fluctuations, with Virginia's rate ending at 4.0% and the US rate ending at 5.1% in Jun-16.

Slide Shows
 Our economists periodically give presentations to various groups of people, and we have posted some of these slide shows online for you to view.
 Link: Virginia Snapshot - June 2016 (NEW)

Part A: Finding the Data

Virginia Economic Development Partnership

www.yesvirginia.com

Community Profiles

View community profiles by: [Cities & Counties](#) / [Regions](#) / [MSAs](#) / [Commonwealth of Virginia](#)

Quick Links (PDF)
Search Profiles (HTML, PDF and Excel)

Cities and Counties	Map Layers
<input type="checkbox"/> Accomack County	
<input type="checkbox"/> Albemarle County	
<input type="checkbox"/> City of Alexandria	
<input type="checkbox"/> Alleghany County	
<input type="checkbox"/> Amelia County	
<input type="checkbox"/> Amherst County	
<input type="checkbox"/> Appomattox County	
<input type="checkbox"/> Arlington County	
<input type="checkbox"/> Augusta County	
<input type="checkbox"/> ...	

Part A: Finding the Data

BLS “Economy at a Glance”

<http://www.bls.gov/eag/eag.va.htm>

- Produced by Bureau of Labor Statistics
- Current and comparative employment numbers by industry

Part A: Finding the Data

BLS “Economy at a Glance”

Virginia

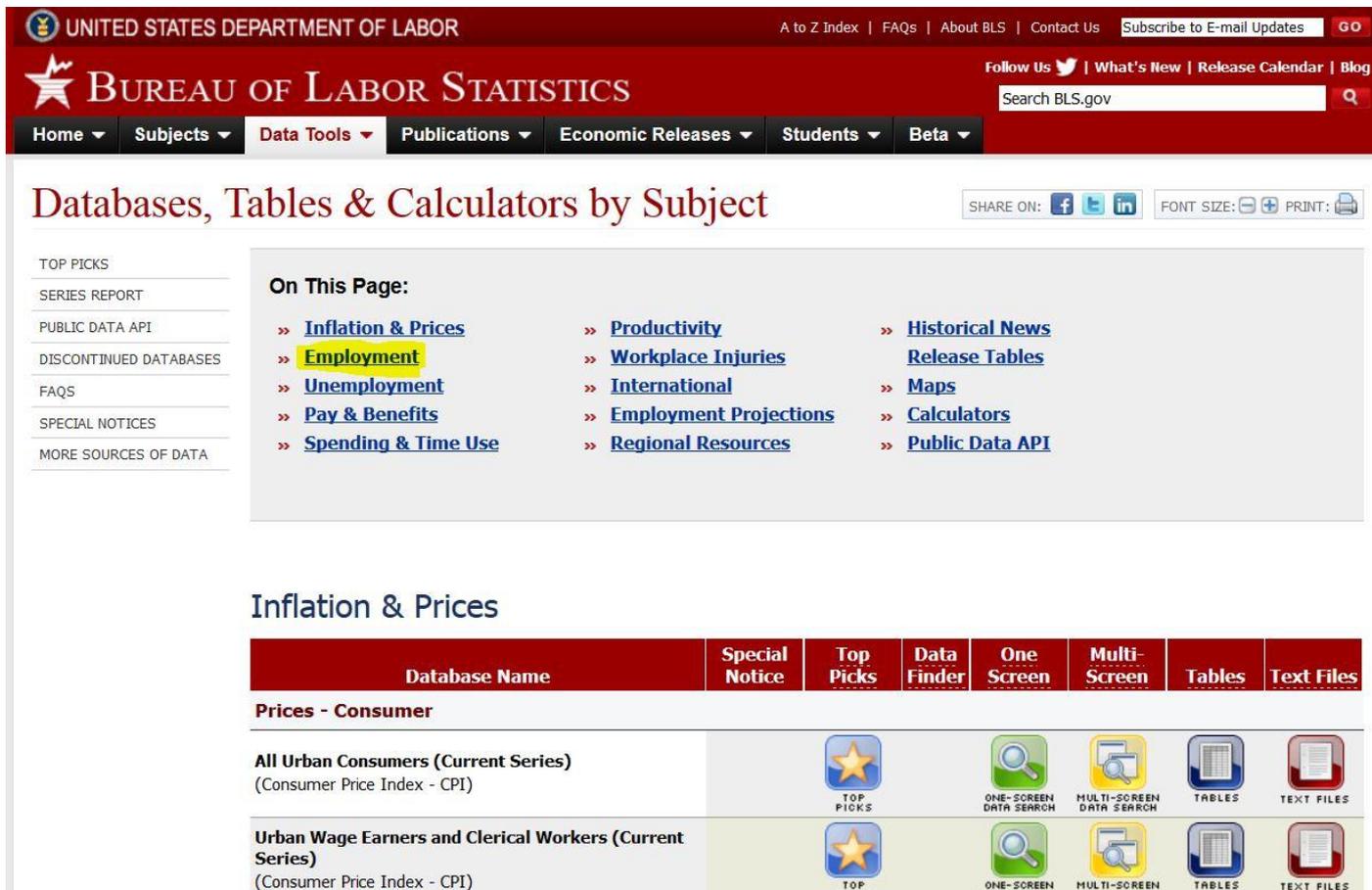
Virginia

Data Series	Back Data	Jan 2016	Feb 2016	Mar 2016	Apr 2016	May 2016	June 2016
Labor Force Data							
Civilian Labor Force (1)		4,245.9	4,244.9	4,243.7	4,230.2	4,213.9	(P) 4,203.7
Employment (1)		4,070.5	4,072.6	4,072.4	4,065.0	4,055.9	(P) 4,049.0
Unemployment (1)		175.5	172.3	171.3	165.1	157.9	(P) 154.7
Unemployment Rate (2)		4.1	4.1	4.0	3.9	3.7	(P) 3.7
Nonfarm Wage and Salary Employment							
Total Nonfarm (3)		3,901.5	3,916.3	3,919.1	3,908.5	3,904.0	(P) 3,912.8
12-month % change		2.3	2.6	2.8	2.2	1.8	(P) 1.9
Mining and Logging (3)		8.5	8.4	8.3	8.4	8.4	(P) 8.3
12-month % change		-9.6	-10.6	-9.8	-8.7	-6.7	(P) -5.7
Construction (3)		182.4	184.0	186.1	182.6	185.2	(P) 185.1
12-month % change		0.8	1.5	3.0	-0.1	0.8	(P) 0.8
Manufacturing (3)		232.4	231.8	230.6	229.3	229.4	(P) 227.8
12-month % change		-0.1	-0.2	-0.7	-1.5	-1.5	(P) -2.3
Trade, Transportation, and Utilities (3)		667.2	668.2	673.3	673.6	671.0	(P) 673.9
12-month % change		3.0	3.1	4.0	3.9	3.2	(P) 3.2
Information (3)		69.0	69.6	69.0	68.7	66.3	(P) 68.3
12-month % change		-1.6	-0.3	-0.6	-1.3	-5.2	(P) -1.9
Financial Activities (3)		199.7	200.3	201.6	200.0	200.2	(P) 201.3
12-month % change		1.7	1.9	2.5	1.8	1.6	(P) 2.1
Professional & Business Services (3)		715.6	722.1	716.5	710.7	713.2	(P) 718.3
12-month % change		4.1	5.0	4.2	2.8	2.7	(P) 3.5
Education & Health Services (3)		522.0	524.2	520.8	522.5	519.9	(P) 530.0

Part A: Finding the Data

More from the Bureau of Labor Statistics

<http://www.bls.gov/data/>



UNITED STATES DEPARTMENT OF LABOR
 BUREAU OF LABOR STATISTICS

Home ▾ Subjects ▾ Data Tools ▾ Publications ▾ Economic Releases ▾ Students ▾ Beta ▾

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Databases, Tables & Calculators by Subject

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- » [Productivity](#)
- » [Workplace Injuries](#)
- » [International](#)
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- » [Maps](#)
- » [Calculators](#)
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Inflation & Prices

Database Name	Special Notice	Top Picks	Data Finder	One Screen	Multi-Screen	Tables	Text Files
Prices - Consumer							
All Urban Consumers (Current Series) (Consumer Price Index - CPI)							
Urban Wage Earners and Clerical Workers (Current Series) (Consumer Price Index - CPI)							

Part A: Finding the Data

BLS National Employment Projections

<http://data.bls.gov/projections/occupationProj>
Employment Projections

Detailed information about the variables displayed here are available in the [technical documentation](#). Files containing these data are available for download at http://www.bls.gov/emp/ep_data_occupational_data.htm.

Refine your results

- Employment (in thousands) in 2014: [\[show/hide\]](#)
- Employment (in thousands) in 2024: [\[show/hide\]](#)
- Employment change (in thousands): [\[show/hide\]](#)
- Employment change (percentage): [\[show/hide\]](#)
- Job openings 2014-2024: [\[show/hide\]](#)
- 2015 median annual wage: [\[show/hide\]](#)
- Work experience in a related occupation: [\[show/hide\]](#)
- Typical on-the-job training: [\[show/hide\]](#)
- Typical entry-level education: [\[show/hide\]](#)

Show All entries

Occupation		Employment (in thousands)		Employment change, 2014-2024		Job openings due to growth and replacement needs, 2014-2024 (in thousands)	2015 median annual wage	Education, work experience, and training		
Title	SOC Code	2014	2024	Number (in thousands)	Percent			Typical entry-level education	Work experience in a related occupation	Typical on-the-job training
Search	Search									
Total, all occupations	00-0000	150,539.9	160,328.8	9,788.9	6.5	46,506.9	\$36,200	-	-	-
Accountants and auditors	13-2011	1,332.7	1,475.1	142.4	10.7	498.0	67,190	Bachelor's degree	None	None

Part B: Using the Data

All members of a secondary CTE team *can* and *should* make use of these data

- Administrators
- Local CTE Advisory Committee
- Teachers
- School Counselors

Part B: Using the Data

Why clusters?

http://www.doe.virginia.gov/instruction/career_technical/career_clusters/



Part B: Using the Data Resources for Students

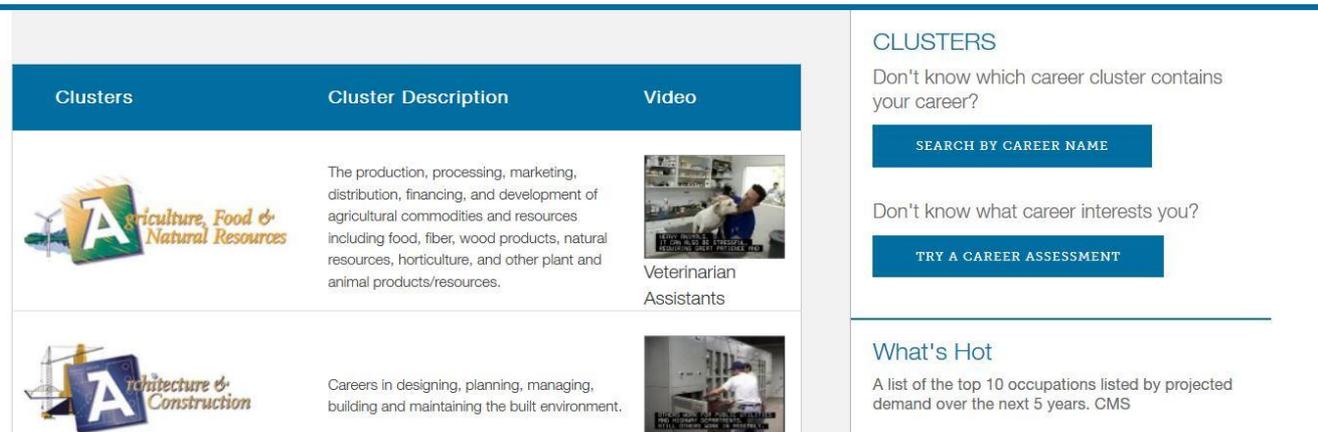
<https://www.vawizard.org>



The screenshot shows the top navigation bar of the vawizard.org website. On the left is the 'Wizzard' logo with a graduation cap icon. To its right are three main menu categories: 'STUDENTS' (highlighted in blue), 'VETERANS' (highlighted in green), and 'WORKFORCE' (highlighted in teal). Further right are links for 'REGISTER' and 'LOGIN'. Below these are secondary navigation links: 'CAREERS', 'GUARANTEED ADMISSION', 'CAREER & COURSE PLANNER', 'PREPARE FOR COLLEGE', and 'IMAGINE'. Below the navigation bar is a breadcrumb trail: 'Home / Careers / Browse by Career Cluster'.

Browse by Career Cluster

Career Clusters are a way of organizing careers into 16 broad career areas. Career Clusters enable you to explore several career options within a field of interest and then learn more about how much each occupation typically pays if there is a demand for this occupation in your area.



The screenshot shows the 'Browse by Career Cluster' page. It features a table with three columns: 'Clusters', 'Cluster Description', and 'Video'. Two clusters are visible: 'Agriculture, Food & Natural Resources' and 'Architecture & Construction'. To the right of the table are two sections: 'CLUSTERS' with a search button and a career assessment button, and 'What's Hot' with a list of top 10 occupations.

Clusters	Cluster Description	Video
	The production, processing, marketing, distribution, financing, and development of agricultural commodities and resources including food, fiber, wood products, natural resources, horticulture, and other plant and animal products/resources.	 Veterinarian Assistants
	Careers in designing, planning, managing, building and maintaining the built environment.	

CLUSTERS
Don't know which career cluster contains your career?
[SEARCH BY CAREER NAME](#)

Don't know what career interests you?
[TRY A CAREER ASSESSMENT](#)

What's Hot
A list of the top 10 occupations listed by projected demand over the next 5 years. CMS

Part B: Using the Data

Signals to Look For

- Are there several occupations within a cluster that are projected to grow quickly?
- Is the occupation growing faster or slower than overall employment in the region?
- How does the starting wage stack up?
- How many jobs are available in the field?
- Will there be many job openings in the future?

Part B: Using the Data

Comparison to overall economy

Virginia overall:

- **3,977,869** estimated total employment in 2014
- Projected to grow **9.25%** by 2024
- **131,569** annual job openings

Part B: Using the Data

Fastest Growing Clusters

1. Health Science

Cluster	Pathways	Estimated Employment 2012	Percent Change 2012-2022	Annual Job Openings
Health Science		294,288	26%	13,583
	Biotechnology Research and Development	1,582	27%	79
	Diagnostic Services	21,026	27%	936
	Health Informatics	12,566	31%	603
	Support Services	18,230	26%	859
	Therapeutic Services	240,884	26%	11,106

Part B: Using the Data

Fastest Growing Clusters

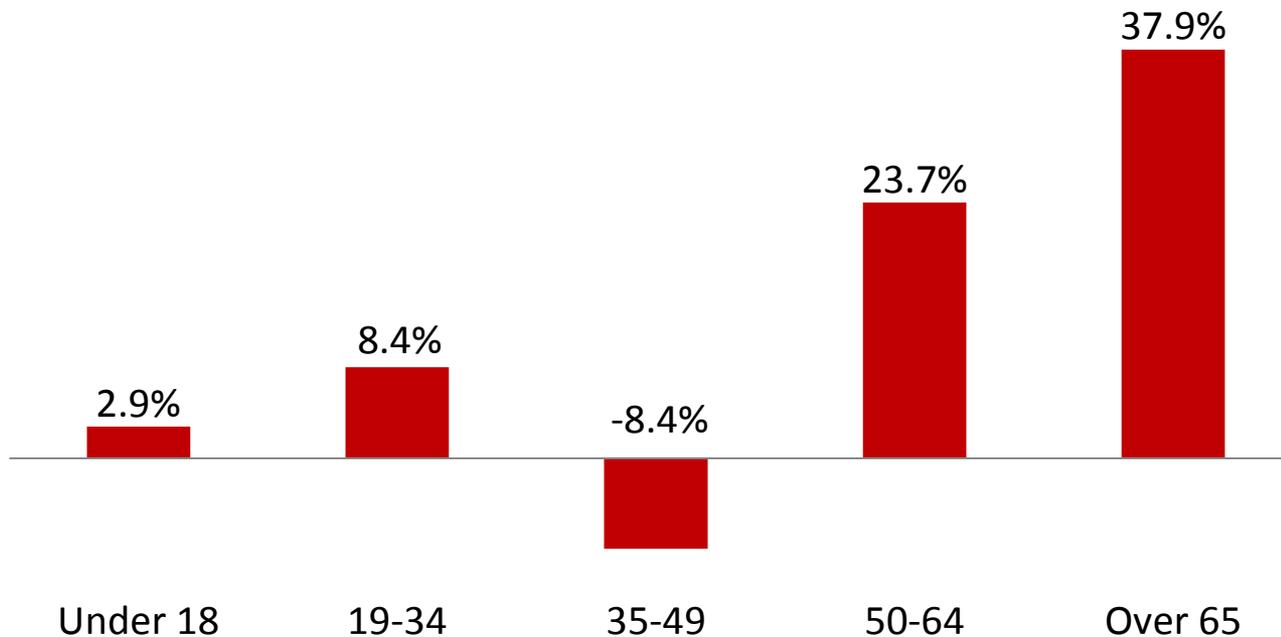
2. Human Services

Cluster	Pathways	Estimated Employment 2012	Percent Change 2012-2022	Annual Job Openings
Human Services		172,369	25%	7,764
	Consumer Services	673	29%	31
	Counseling & Mental Health Services	22,822	25%	1,077
	Early Childhood Development & Services	28,524	19%	1,384
	Family & Community Services	25,032	20%	1,082
	Personal Care Services	95,318	28%	4,190

Part B: Using the Data

Fastest Growing Clusters

**Statewide Growth in Population by Age Group
2005-2015**



Part B: Using the Data

Fastest Growing Clusters

3. Information Technology

Cluster	Pathways	Estimated Employment 2012	Percent Change 2012-2022	Annual Job Openings
Information Technology		226,216	25%	9,323
	Information Support and Services	46,504	15%	1,558
	Network Systems	39,722	22%	1,538
	Programming and Software Development	123,258	31%	5,650
	Web and Digital Communications	16,732	21%	577

Part B: Using the Data

Largest Cluster

Business Management & Administration

Cluster	Pathways	Estimated Employment 2012	Percent Change 2012-2022	Annual Job Openings
Business Management & Administration		846,392	9%	26,237
	Administrative Support	475,902	9%	14,972
	Business Information Management	36,459	16%	1,191
	General Management	128,778	11%	4,027
	Human Resources Management	36,309	13%	1,187
	Operations Management	168,944	7%	4,860

Part C:

New CTE Course Application

Course application is available at

http://www.doe.virginia.gov/administrators/superintendents_memos/2015/212-15a.pdf

You may find instructions at

http://www.doe.virginia.gov/administrators/superintendents_memos/2015/212-15b.pdf

Part C: New CTE Course Application

Part H, Section 1

Columns: 1	2	3	4	5	6	7
Local Workforce Investment Area (LWIA)	Most recent 10-year projection percent for rate of employment growth (LWIA)	Most recent 10-year projection for number of new jobs (LWIA)	Most recent 10-year projection percent for rate of employment growth (Commonwealth)	Most recent 10-year projection percent for rate of employment growth (National)	Most recent 10-year projection percent for rate of employment growth across all occupations (LWIA)	Most recent 10-year projection percent for rate of growth for identified pathway (Commonwealth)
LWIA Area:						
Occupation:						
Pathway:						
Occupation:						
Pathway:						
Occupation:						
Pathway:						
Occupation:						
Pathway:						

Part C:

New CTE Course Application

- Applying for *Building Trades II* from Johnston County* in Local Workforce Investment Area XIII
- Key words:
 - masonry,
 - carpentry,
 - electricity, and
 - plumbing
- ctetrailblazers.org/labor-market-data
- Download spreadsheet for LWIA XIII (Bay Consortium)

Part C:

New CTE Course Application

LWIA XIII) Employment Projections by Career Clusters 2012-22

Commission produces occupation data for a limited number of occupations for this area. Trailblazers matched this information to career clusters and pathways. Some occupations appear in two clusters. Commonwealth level but is not listed below, the occupation may exist at the LWIA level, but data are unavailable due to confidentiality issues.

Code	Occupation Title	Predominant level of education & training*	Estimated Employment 2012	Projected Employment 2022	Numeric Change 2012-2022	Percent Change 2012-2022	Annual Job Openings
			162,160	189,818	27,658	17%	6,786
Natural Resources			4,473	5,166	693	15%	175
Arts and Communications			1,248	1,563	315	25%	56
319096	Veterinary Assistants and Laboratory Animal Caretakers	Some college/Assoc	96	129	33	34%	5
392011	Animal Trainers	HS or less & Training/certi	264	375	111	42%	23
392021	Nonfarm Animal Caretakers	HS or less	888	1,059	171	19%	28
Health Service Systems			379	439	60	16%	17
518031	Water and Wastewater Treatment Plant and System Operators	HS or less & Training/certi	236	271	35	15%	12
537081	Refuse and Recyclable Material Collectors	HS or less	143	168	25	17%	5
Manufacturing and Processing Systems			439	448	9	2%	14
513021	Butchers and Meat Cutters	HS or less & Training/certi	144	161	17	12%	6
513099	Food Processing Workers, All Other	HS or less	295	287	(8)	-3%	8
Transportation Systems			131	160	29	22%	5
454022	Logging Equipment Operators	HS or less & Training/certi	131	160	29	22%	5
Business and Management Systems			2,276	2,556	280	12%	83
371012	First-Line Supervisors of Landscaping, Lawn Service, and Gro	HS or less & Work experie	309	355	46	15%	9
373011	Landscaping and Groundskeeping Workers	HS or less	1,789	2,025	236	13%	69
452092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	HS or less	178	176	(2)	-1%	5
Construction			8,100	9,783	1,683	21%	333
Construction - Total			4,408	5,486	1,078	24%	177
471011	First-Line Supervisors of Construction Trades and Extraction	HS or less & Work experie	615	747	132	21%	20
472031	Carpenters	HS or less & Training/certi	1,203	1,499	296	25%	45
472051	Cement Masons and Concrete Finishers	HS or less & Training/certi	393	517	124	32%	16
472061	Construction Laborers	HS or less	1,095	1,383	288	26%	52
472073	Operating Engineers and Other Construction Equipment Operato	HS or less & Training/certi	585	730	145	25%	27
472111	Electricians	HS or less & Training/certi	261	299	38	15%	9
472141	Painters, Construction and Maintenance	HS or less & Training/certi	159	190	31	19%	5
472151	Pipelayers	HS or less	97	121	24	25%	3
Information Technology Systems			417	519	102	24%	23
131051	Cost Estimators	Some college/Assoc	226	292	66	29%	14
172051	Civil Engineers	Bachelor's or more	191	227	36	19%	9

Part C:

New CTE Course Application



LWIA XIII) Employment Projections by Career Clusters 2012-22

Commission produces occupation data for a limited number of occupations for this area. Trailblazers matched this information to career clusters and pathways. Some occupations appear in two clusters. Commonwealth level but is not listed below, the occupation may exist at the LWIA level, but data are unavailable due to confidentiality issues.

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Industrial Service Systems			379	439	60	16%	17
518031	Water and Wastewater Treatment Plant and System Operators	HS or less & Training/certi	236	271	35	15%	12
537081	Refuse and Recyclable Material Collectors	HS or less	143	168	25	17%	5
Manufacturing and Processing Systems			439	448	9	2%	14
513021	Butchers and Meat Cutters	HS or less & Training/certi	144	161	17	12%	6
513099	Food Processing Workers, All Other	HS or less	295	287	(8)	-3%	8
Resources Systems			131	160	29	22%	5
454022	Logging Equipment Operators	HS or less & Training/certi	131	160	29	22%	5
Arts			2,276	2,556	280	12%	83
371012	First-Line Supervisors of Landscaping, Lawn Service, and Gro	HS or less & Work experie	309	355	46	15%	9
373011	Landscaping and Groundskeeping Workers	HS or less	1,789	2,025	236	13%	69
452092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	HS or less	178	176	(2)	-1%	5
Production			8,100	9,783	1,683	21%	333
Construction			4,408	5,486	1,078	24%	177
471011	First-Line Supervisors of Construction Trades and Extraction	HS or less & Work experie	615	747	132	21%	20
472031	Carpenters	HS or less & Training/certi	1,203	1,499	296	25%	45
472051	Cement Masons and Concrete Finishers	HS or less & Training/certi	393	517	124	32%	16
472061	Construction Laborers	HS or less	1,095	1,383	288	26%	52
472073	Operating Engineers and Other Construction Equipment Operato	HS or less & Training/certi	585	730	145	25%	27
472111	Electricians	HS or less & Training/certi	261	299	38	15%	9
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SOC Summary VA Clusters Duplicated LWIA XIII SOC Summary **LWIA Clusters Duplicated**

Part C:

New CTE Course Application

Bay Consortium (LWIA XIII) Employment Projections by Career Clusters 2012-22

The Virginia Employment Commission produces occupation data for a limited number of occupations for this area. Trailblazers matched this information to career clusters and pathways. Some occupations appear in two clusters. If occupation exists at the Commonwealth level but is not listed below, the occupation may exist at the LWIA level, but data are unavailable due to confidentiality issues.

Clusters	Pathways	Code	Occupation Title	Predominant level of education & training*	Estimated Employment 2012	Projected Employment 2022	Numeric Change 2012-2022	Percent Change 2012-2022	Annual Job Openings	Annual VA Mean Wage 2013**	Annual Median Wage 2013**
All Occupations					162,160	189,818	27,658	17%	6,786		
Agriculture, Food & Natural Resources					4,473	5,166	693	15%	175		
Animal Systems					1,248	1,563	315	25%	56		
		319096	Veterinary Assistants and Laboratory Animal Caretakers	Some college/Assoc	96	129	33	34%	5	\$26,230	
		392011	Animal Trainers	HS or less & Training/certi	264	375	111	42%	23	\$27,290	
		392021	Nonfarm Animal Caretakers	HS or less	888	1,059	171	19%	28	\$21,530	
Environmental Service Systems					379	439	60	16%	17		
		518031	Water and Wastewater Treatment Plant and System Operators	HS or less & Training/certi	236	271	35	15%	12	\$40,380	
		537081	Refuse and Recyclable Material Collectors	HS or less	143	168	25	17%	5	\$29,390	
Food Products and Processing Systems					439	448	9	2%	14		
		513021	Butchers and Meat Cutters	HS or less & Training/certi	144	161	17	12%	6	\$30,820	
		513099	Food Processing Workers, All Other	HS or less	295	287	(8)	-3%	8	\$24,070	
Natural Resources Systems					131	160	29	22%	5		
		454022	Logging Equipment Operators	HS or less & Training/certi	131	160	29	22%	5	\$31,410	
Plant Systems					2,276	2,556	280	12%	83		
		371012	First-Line Supervisors of Landscaping, Lawn Service, and Gro	HS or less & Work experie	309	355	46	15%	9	\$49,180	
		373011	Landscaping and Groundskeeping Workers	HS or less	1,789	2,025	236	13%	69	\$25,120	
		452092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	HS or less	178	176	(2)	-1%	5	\$22,870	
Architecture & Construction					8,100	9,783	1,683	21%	333		
Construction					4,408	5,486	1,078	24%	177		
		471011	First-Line Supervisors of Construction Trades and Extraction	HS or less & Work experie	615	747	132	21%	20	\$60,970	
		472031	Carpenters	HS or less & Training/certi	1,203	1,499	296	25%	45	\$40,160	
		472051	Cement Masons and Concrete Finishers	HS or less & Training/certi	393	517	124	31%	16	\$36,250	
		472061	Construction Laborers	HS or less	1,095	1,383	288	26%	52	\$28,470	
		472073	Operating Engineers and Other Construction Equipment Operato	HS or less & Training/certi	585	730	145	25%	27	\$38,890	
		472111	Electricians	HS or less & Training/certi	261	299	38	15%	9	\$46,200	

Part C:

New CTE Course Application

Revised 07/01/15

Labor Market/Employment Data

Columns: 1	2	3	4	5	6	7
Local Workforce Investment Area (LWIA) LWIA Area: XIII (Bay Consortium)	Most recent 10-year projection percent for rate of employment growth (LWIA)	Most recent 10-year projection for number of new jobs (LWIA)	Most recent 10-year projection percent for rate of employment growth (Commonwealth)	Most recent 10-year projection percent for rate of employment growth (National)	Most recent 10-year projection percent for rate of employment growth across all occupations (LWIA)	Most recent 10-year projection percent for rate of growth for identified pathway (Commonwealth)
Occupation: Carpenter	25%					
Pathway: Construction						

Part C:

New CTE Course Application

Bay Consortium (LWIA XIII) Employment Projections by Career Clusters 2012-22

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Animal Systems					1,248	1,563	315	25%	56		
		319096	Veterinary Assistants and Laboratory Animal Caretakers	Some college/Assoc	96	129	33	34%	5	\$26,230	
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Environmental Service Systems					379	439	60	16%	17		
		518031	Water and Wastewater Treatment Plant and System Operators	HS or less & Training/certi	236	271	35	15%	12	\$40,380	
		537081	Refuse and Recyclable Material Collectors	HS or less	143	168	25	17%	5	\$29,390	
Food Products and Processing Systems					439	448	9	2%	14		
		513021	Butchers and Meat Cutters	HS or less & Training/certi	144	161	17	12%	6	\$30,820	
		513099	Food Processing Workers, All Other	HS or less	295	287	(8)	-3%	8	\$24,070	
Natural Resources Systems					131	160	29	22%	5		
		454022	Logging Equipment Operators	HS or less & Training/certi	131	160	29	22%	5	\$31,410	
Plant Systems					2,276	2,556	280	12%	83		
		371012	First-Line Supervisors of Landscaping, Lawn Service, and Gro	HS or less & Work experie	309	355	46	15%	9	\$49,180	
		373011	Landscaping and Groundskeeping Workers	HS or less	1,789	2,025	236	13%	69	\$25,120	
		452092	Farmworkers and Laborers, Crop, Nursery, and Greenhouse	HS or less	178	176	(2)	-1%	5	\$22,870	
Architecture & Construction					8,100	9,783	1,683	21%	333		
Construction					4,408	5,486	1,078	24%	177		
		471011	First-Line Supervisors of Construction Trades and Extraction	HS or less & Work experie	615	747	132	21%	20	\$60,970	
		472031	Carpenters	HS or less & Training/certi	1,203	1,499	296	25%	45	\$40,160	
		472051	Cement Masons and Concrete Finishers	HS or less & Training/certi	393	517	124	32%	16	\$36,250	
		472061	Construction Laborers	HS or less	1,095	1,383	288	26%	52	\$28,470	
		472073	Operating Engineers and Other Construction Equipment Operato	HS or less & Training/certi	585	730	145	25%	27	\$38,890	
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Part C: New CTE Course Application

Revised 07/01/15

Labor Market/Employment Data

Columns: 1	2	3	4	5	6	7
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LWIA Area: XIII (Bay Consortium)						
Occupation: Carpenter	25%	296				
Pathway: Construction						

Part C:

New CTE Course Application

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		493041	Farm Equipment Mechanics and Service Technicians	HS or less & Training/certi	394	425	31	8%	14	\$34,970	
		493053	Outdoor Power Equipment and Other Small Engine Mechanics	HS or less & Training/certi	937	1,010	73	8%	27	\$34,300	
Architecture & Construction					284,512	335,513	51,001	18%	10,535		
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Part C: New CTE Course Application

CSV

Show entries

Occupation		Employment (in thousands)		Employment change, 2012-2022		Job openings due to growth and replacement needs, 2012-2022 (in thousands)	2012 median annual wage	Education, work experience, and training		
Title	SOC Code	2012	2022	Number (in thousands)	Percent			Typical entry-level education	Work experience in a related occupation	Typical on-the-job training
<input type="text" value="Carpenter"/>	<input type="text" value="Search"/>									
Total, all occupations	00-0000	145,355.8	160,983.7	15,628.0	10.8	50,557.3	\$34,750	-	-	-
Cabinetmakers and bench carpenters Show/hide Example Job Titles	51-7011	86.2	89.7	3.5	4.1	10.4	30,980	High school diploma or equivalent	None	Moderate-term on-the-job training
Carpenters Show/hide Example Job Titles	47-2031	901.2	1,119.4	218.2	24.2	329.2	39,940	High school diploma or equivalent	None	Apprenticeship
First-line supervisors of	47-1011	545.5	673.8	128.3	23.5	187.1	59,700	High school	5 years or more	None

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New CTE Course Application

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New CTE Course Application

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Occupation: Carpenter	25%	296	24%	24.2%	17%	20%
Pathway: Construction						

Part C:

New CTE Course Application

- Complete this table for as many occupations as apply
- Consider occupations outside of the immediate pathway by asking yourself the following:
 - **What skills does this course build?**
 - **How might this course motivate students to pursue particular careers?** For example, students interested in mechanical or civil engineering may benefit from *Building Trades II*.

Part C: New CTE Course Application

Part H, Section 2, Questions (a) through (d) reference your completed table.

Part C:

New CTE Course Application

Revised 07/01/15

H.2. Address the following questions in order to justify why this course should be approved.

a. Does the projected rate of growth for the occupation(s) you have identified exceed the rate of growth for all occupations in your LWIA? (compare column 2 to column 6 in your LWIA)

Yes

No

Occupations	Data from Column 2 in table H.1	Data from Column 6 in table H.1	Difference (Column 2 - Column 6)
Carpenter	25%	17%	8%

Part C:

New CTE Course Application

b. Does the projected rate of growth for the occupations you have identified exceed the rate of employment growth for the overall pathway in the Commonwealth? (compare column 2 to column 7)

Yes

No

Occupations	Data from Column 2 in table H.1	Data from Column 7 in table H.1	Difference (Column 2 - Column 7)
Carpenter	25%	24%	1%

Part C:

New CTE Course Application

c. Sometimes, a low rate of growth may still amount to a reasonably large number of jobs. Do you see evidence for a large volume of new jobs supported by this course (reference column 3 on the Labor Market/Employment Data table)?

Yes

No

d. Divisions prepare students for state and national competitiveness. Do the growth rates found in columns 4 or 5 on the Labor Market/Employment Data table demonstrate that the careers supported by the course are expected to see rapid growth at the state or national level?

Yes

No

Part C:

New CTE Course Application

Section H, Part 2, Question (e) asks you to find another source of information to support your claim that this course will be valuable to your division. Consider the following:

- **announcements of new industry openings,**
- **newspaper articles,**
- **other reliable examples of information about your community.**

Go forth and analyze!

There exists quantitative information on high-skill, high-demand, high-wage careers. Use these data to prepare your students for the workforce that they will be facing in the years to come.

Session Evaluation

Please take a few minutes to
complete the session evaluation.

<https://www.surveymonkey.com/r/6ZWNQTTQ>

Next Professional Development Training Session



September 1, 2016
CTE Federal Program Monitoring:
Self Assessment and Civil Rights Review
(Part 1 of 2)

Contacts

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