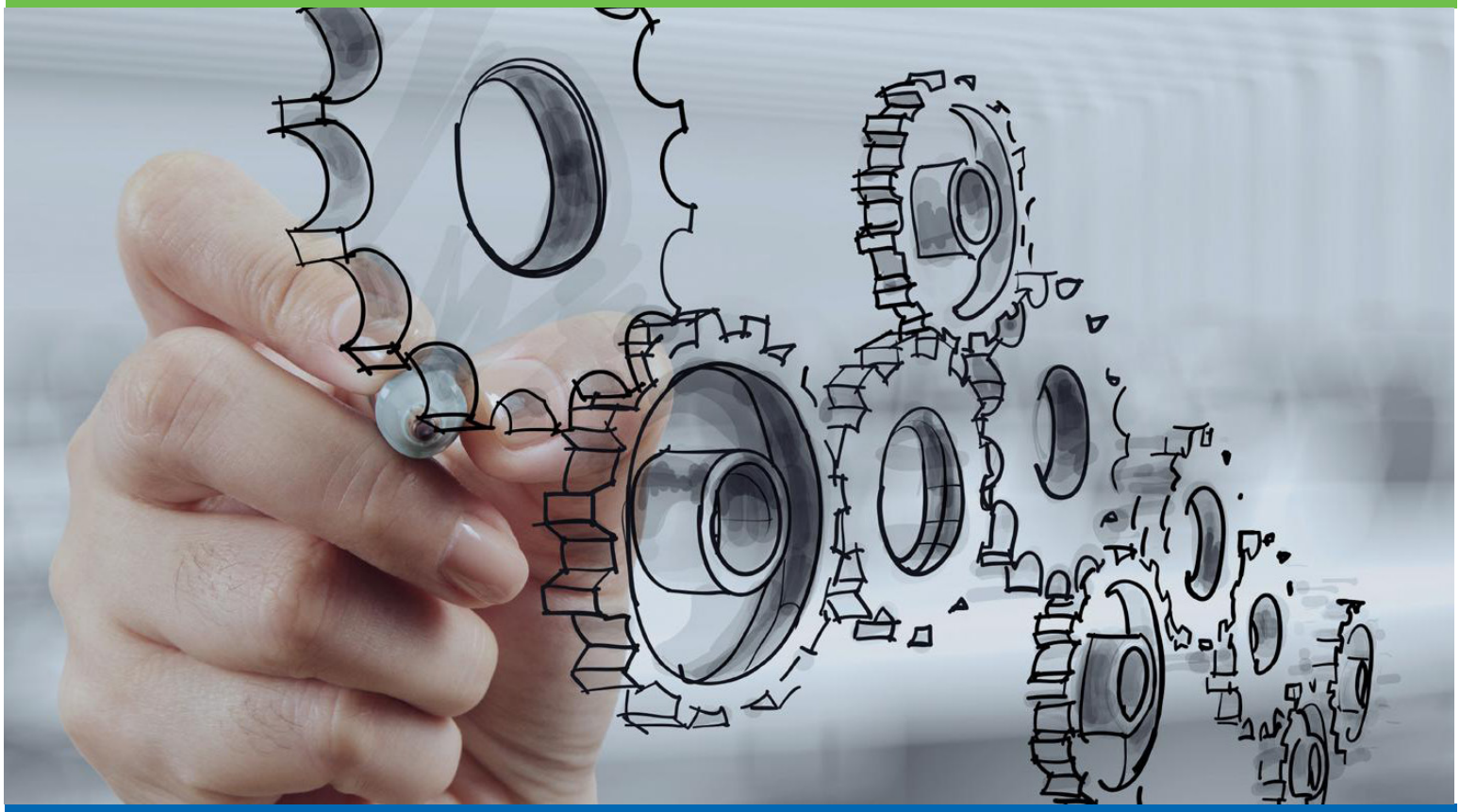
Third Quarter 2019 Volume 1, Issue 3

CAREER QUARTERLY

Career Information, Job Seeking Advice, Labor Market Data, and More!



In This Issue

Virginia's Economy at a Glance

Data Series	Mar 2019	Apr 2019	May 2019	June 2019	July 2019
Labor Force Data					
Civilian Labor Force(1)	4,360.3	4,362.7	4,368.5	4,377.4	4,390.3
Employment(1)	4,233.6	4,235.4	4,239.5	4,249.5	4,264.1
Unemployment(1)	126.6	127.3	129.0	127.9	126.1
Unemployment Rate(2)	2.9	2.9	3.0	2.9	2.9
Nonfarm Wage and Salary Employment					
Total Nonfarm(3)	4,033.0	4,035.4	4,032.8	4,027.3	4,040.7
12-month % change	0.9	0.9	0.8	0.6	0.8
Mining and Logging(3)	7.9	7.9	8.0	8.0	8.0
12-month % change	-1.3	-1.3	1.3	0.0	1.3
Construction(3)	198.7	198.9	200.2	200.2	202.4
12-month % change	0.4	0.6	1.6	1.9	1.9
Manufacturing(3)	246.0	246.4	246.9	246.9	246.3
12-month % change	3.2	3.1	3.0	2.8	2.4
Trade, Transportation, and Utilities(3)	658.7	658.6	655.5	652.8	652.4
12-month % change	-0.5	-0.3	-0.9	-1.0	-1.1
Information(3)	64.8	64.4	64.7	64.0	63.9
12-month % change	-4.7	-5.6	-5.0	-5.7	-5.3
Financial Activities(3)	205.6	207.8	207.2	207.3	209.3
12-month % change	-0.9	0.1	-0.2	-0.4	0.7
Professional & Business Services(3)	759.1	762.1	759.1	757.9	760.5
12-month % change	1.7	1.9	1.3	0.9	1.2
Education & Health Services(3)	547.2	545.2	548.5	550.7	553.1
12-month % change	1.4	1.0	1.9	1.8	2.1
Leisure & Hospitality(3)	419.9	419.1	417.2	416.3	417.5
12-month % change	2.9	2.8	2.3	1.9	2.2
Other Services(3)	201.4	201.3	201.7	202.4	203.2
12-month % change	0.1	0.4	0.6	0.8	1.1
Government(3)	723.7	723.7	723.8	720.8	724.1
12-month % change	0.4	0.4	0.2	-0.2	0.1

Footnotes

(1) Number of persons, in thousands, seasonally adjusted.

(2) In percent, seasonally adjusted.

(3) Number of jobs, in thousands, seasonally adjusted.

Data extracted on: October 2, 2019

Source: https://www.bls.gov/eag/eag.va.htm

Career Planning

17 Tips for Great Job Interviews

1. Research the industry and company.

An interviewer may ask how you perceive his company's position in its industry, who the firm's competitors are, what its competitive advantages are, and how it should best go forward. For this reason, avoid trying to thoroughly research a dozen different industries. Focus your job search on just a few industries instead.

2. Clarify your "selling points" and the reasons you want the job.

Prepare to go into every interview with three to five key selling points in mind, such as what makes you the best candidate for the position. Have an example of each selling point prepared ("I have good communication skills. For example, I persuaded an entire group to ..."). And be prepared to tell the interviewer why you want that job – including what interests you about it, what rewards it offers that you find valuable, and what abilities it requires that you possess. If an interviewer doesn't think you're really, really interested in the job, he or she won't give you an offer – no matter how good you are!

3. Anticipate the interviewer's concerns and reservations.

There are always more candidates for positions than there are openings. So interviewers look for ways to screen people out. Put yourself in their shoes and ask yourself why they might not want to hire you ("I don't have this," "I'm not that," etc.). Then prepare your defense: "I know you may be thinking that I might not be the best fit for this position because [their reservation]. But you should know that [reason the interviewer shouldn't be overly concerned]."

4. Prepare for common interview questions.

Every "how to interview" book has a list of a hundred or more "common interview questions." (You might wonder just how long those interviews are if there are that many common questions!) So how do you prepare? Pick any list and think about which questions you're most likely to encounter, given your age and status (about to graduate, looking for a summer internship). Then prepare your answers so you won't have to fumble for them during the actual interview.

5. Line up your questions for the interviewer.

Come to the interview with some intelligent questions for the interviewer that demonstrate your knowledge of the company as well as your serious intent. Interviewers always ask if you have any questions, and no matter what, you should have one or two ready. If you say, "No, not really," he or she may conclude that you're not all that interested in the job or the company. A good all-purpose question is, "If you could design the ideal candidate for this position from the ground up, what would he or she be like?"

If you're having a series of interviews with the same company, you can use some of your prepared questions with each person you meet (for example, "What do you think is the best thing about working here?" and "What kind of person would you most like to see fill this position?") Then, try to think of one or two others during each interview itself.

6. Practice, practice, practice.

It's one thing to come prepared with a mental answer to a question like, "Why should we hire you?" It's another challenge entirely to say it out loud in a confident and convincing way. The first time you try it, you'll sound garbled and confused, no matter how clear your thoughts are in your own mind! Do it another 10 times, and you'll sound a lot smoother and more articulate.

But you shouldn't do your practicing when you're "on stage" with a recruiter; rehearse before you go to the interview. The best way to rehearse? Get two friends and practice interviewing each other in a "round robin": one person acts as the observer and the "interviewee" gets feedback from both the observer and the "interviewer." Go for four or five rounds, switching roles as you go. Another idea (but definitely second-best) is to tape record your answer and then play it back to see where you need to improve. Whatever you do, make sure your practice consists of speaking aloud. Rehearsing your answer in your mind won't cut it.

7. Score a success in the first five minutes.

Some studies indicate that interviewers make up their minds about candidates in the first five minutes of the interview – and then spend the rest of the interview looking for things to confirm that decision! So what can you do in those five minutes to get through the gate? Come in with energy and enthusiasm, and express your appreciation for the interviewer's time. (Remember: She may be seeing a lot of other candidates that day and may be tired from the flight in. So bring in that energy!)

Also, start off with a positive comment about the company – something like, "I've really been looking forward to this meeting [not "interview"]. I think [the company] is doing great work in [a particular field or project], and I'm really excited by the prospect of being able to contribute."

8. Get on the same side as the interviewer.

Many interviewers view job interviews as adversarial: Candidates are going to try to pry an offer out of the interviewer, and the interviewer's job is to hold onto it. Your job is to transform this "tug of war" into a relationship in which you're both on the same side. You could say something as simple as, "I'm happy to have the chance to learn more about your company and to let you learn more about me, so we can see if this is going to be a good match or not. I always think that the worst thing that can happen is to be hired into a job that's wrong for you – then nobody's happy!"

9. Be assertive and take responsibility for the interview.

Perhaps out of the effort to be polite, some usually assertive candidates become overly passive during job interviews. But politeness doesn't equal passivity. An interview is like any other conversation – it's a dance in which you and a partner move together, both responding to the other. Don't make the mistake of just sitting there waiting for the interviewer to ask you about that Nobel Prize you won. It's your responsibility to make sure he walks away knowing your key selling points.

10. Make your selling points clear.

If a tree falls in the forest and no one is there to hear it, did it make a sound? More important, if you communicate your selling points during a job interview and the interviewer doesn't get it, did you score? On this question, the answer is clear: No! So don't bury your selling points in long-winded stories. Instead, tell the interviewer what your selling point is first, then give the example.

11. Think positive.

No one likes a complainer, so don't dwell on negative experiences during an interview. Even if the interviewer asks you point blank, "What courses have you liked least?" or "What did you like least about that previous job?" don't answer the question. Or more specifically, don't answer it as it's been asked. Instead, say something like, "Well, actually I've found something about all of my classes that I've liked. For example, although I found [class] to be very tough, I liked the fact that [positive point about the class]" or "I liked [a previous job] quite a bit, although now I know that I really want to [new job]."

12. Close on a positive note.

If a salesman came to you and demonstrated his product, then thanked you for your time and walked out the door, what did he do wrong? He didn't ask you to buy it! If you get to the end of an interview and think you'd really like that job, ask for it! Tell the interviewer that you'd really, really like the job – that you were excited about it before the interview and are even more excited now, and that you're convinced you'd like to work there. If there are two equally good candidates at the end of the search – you and someone else – the interviewer will think you're more likely to accept the offer, and thus may be more inclined to make an offer to you.

Even better, take what you've learned about yourself from your MyPath career assessment and use it to explain why you think this is the job for you: "I've done some careful career self-assessment, and I know that I'm most interested in [one or two of your most important career interest themes], and – correct me if I'm wrong – it seems that this position would allow me to express those interests. I also know that I'm most motivated by [two or three of your most important motivators from your MyPath assessment], and I have the sense that if I do well, I could get those rewards in this position.

Finally, I know that my strongest abilities are [two or three of your strongest abilities from your MyPath assessment], and I see those as being the abilities you most need for this position." If you follow this tip, you'll be (a) asking for the job, (b) explaining why you think it's a good match, (c) displaying your thoughtfulness and maturity, and (d) further disarming the tug-of-war dynamic that interviewers anticipate. You'll be making the strongest possible "close" – and that's worth a lot!

13. Bring a copy of your resume to every interview.

Have a copy of your resume with you when you go to every interview. If the interviewer has misplaced his or her copy, you'll save a lot of time (and embarrassment on the interviewer's part) if you can just pull your extra copy out and hand it over.

14. Make the most of the "Tell me about yourself" question.

Many interviewers begin interviews with this question. So how should you respond? You can go into a story about where you were born, what your parents do, how many brothers and sisters and dogs and cats you have, and that's okay. But would you rather have the interviewer writing down what kind of dog you have – or why the company should hire you?

Consider responding to this question with something like: "Well, obviously I could tell you about lots of things, and if I'm missing what you want, please let me know. But the three things I think are most important for you to know about me are [your selling points]. I can expand on those a little if you'd like." Interviewers will always say, "Sure, go ahead." Then you say, "Well, regarding the first point, [give your example]. And when I was working for [company], I [example of another selling point]." Etc. This strategy enables you to focus the first 10-15 minutes of the interview on all of your key selling points. The "Tell me about yourself" question is a golden opportunity. Don't miss it!

15. Speak the right body language.

Dress appropriately, make eye contact, give a firm handshake, have good posture, speak clearly, and don't wear perfume or cologne! Sometimes interview locations are small rooms that may lack good air circulation. You want the interviewer paying attention to your job qualifications -- not passing out because you've come in wearing too much perfume or cologne.

16. Be ready for "behavior-based" interviews.

One of the most common interview styles today is to ask people to describe experiences they have had that demonstrate behaviors that the company thinks are important for a particular position. You might be asked to talk about a time when you made an unpopular decision, displayed a high level of persistence, or made a decision under time pressure and with limited information, for example.

Step 1 is to anticipate the behaviors this hiring manager is likely to be looking for. **Step 2** is to identify at least one example of when you demonstrated each behavior. **Step 3** is to prepare a story for each example. Many people recommend using SAR (Situation-Action-Result) as a model for the story. Step 4 is to practice telling the story. Also, make sure to review your resume before the interview with this kind of format in mind; this can help you to remember examples of behaviors you may not have anticipated in advance.

17. Don't give up!

If you've had a bad interview for a job that you truly think would be a great fit for you (not just something you want badly), don't give up! Write a note, send an email, or call the interviewer to let him or her know that you think you did a poor job of communicating why you think this job would be a good match. Reiterate what you have to offer the company, and say that you'd like an opportunity to contribute. Whether this strategy will get you a job offer depends on the company and on you. But one thing's for sure: If you don't try, your chances are exactly zero. We've seen this approach work on numerous occasions, and we encourage you to give it that last shot.

Source: Excerpt from https://www.experisjobs.us/exp_us/en/career-advice/20-tips-job-interviews.htm

Census Project Shows Job Flows By Institution, Degree, Major and Geography

Andrew Foote

Thinking about college? You may want to consider where you will likely locate to land your first job after you graduate and in what industry.

A good way to do this? Check out the U.S. Census Bureau's Post-Secondary Employment Outcomes (PSEO), which shows where college graduates get jobs and in what industries.

On top of that, it does it by institution and type of degree.

The data address a major gap in education statistics by providing a much clearer picture of how graduates transition from school to employment.

The PSEO project tabulates employment flows and earnings outcomes by institution, degree level, and degree field, and provides counts of employment by employer industry sector and Census Division.

PSEO does this by linking university transcript data to the Census Bureau's Longitudinal Employer-Household Dynamics (LEHD) records. Those records list job histories covered by unemployment insurance by employer, which is then linked to industry and location information on the employers.

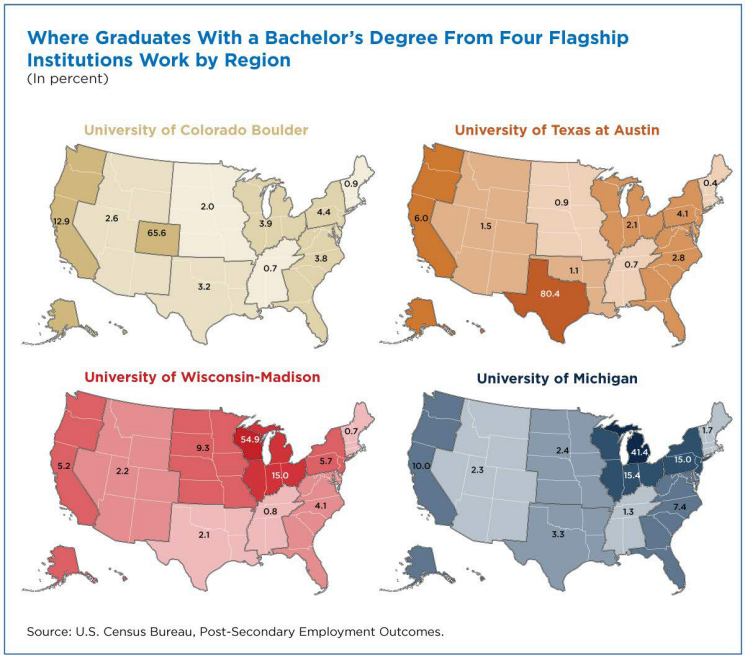
"Up until now, individual states could only measure earnings and employment outcomes for persons who worked in the same state where they were educated," said John Abowd, the Census Bureau's chief scientist and associate director for Research and Methodology.

"Thanks to this pilot," he said, "states, universities, and prospective students have the opportunity to see employment outcomes by program of study, by region and industry."

What PSEO Offers

Currently, the PSEO statistics include data from the University of Texas System, Colorado Department of Higher Education, University of Michigan-Ann Arbor, and University of Wisconsin-Madison.

The figures below show where graduates with bachelor's degrees from four flagship institutions work by Census Division.



Do Graduates Find Jobs Nearby?

There are significant differences in the geographic dispersion of employment for graduates.

UT-Austin, for example, sees most of its students stay in the state, while University of Michigan graduates disperse across a wide geographic area.

University of Colorado Boulder and UW-Madison are somewhere in the middle of these two extremes.

First Post-Graduation Jobs Don't Always Match Field of Study

In addition to geographic dispersion, PSEO allows users to see the industry sector of employment for graduates.

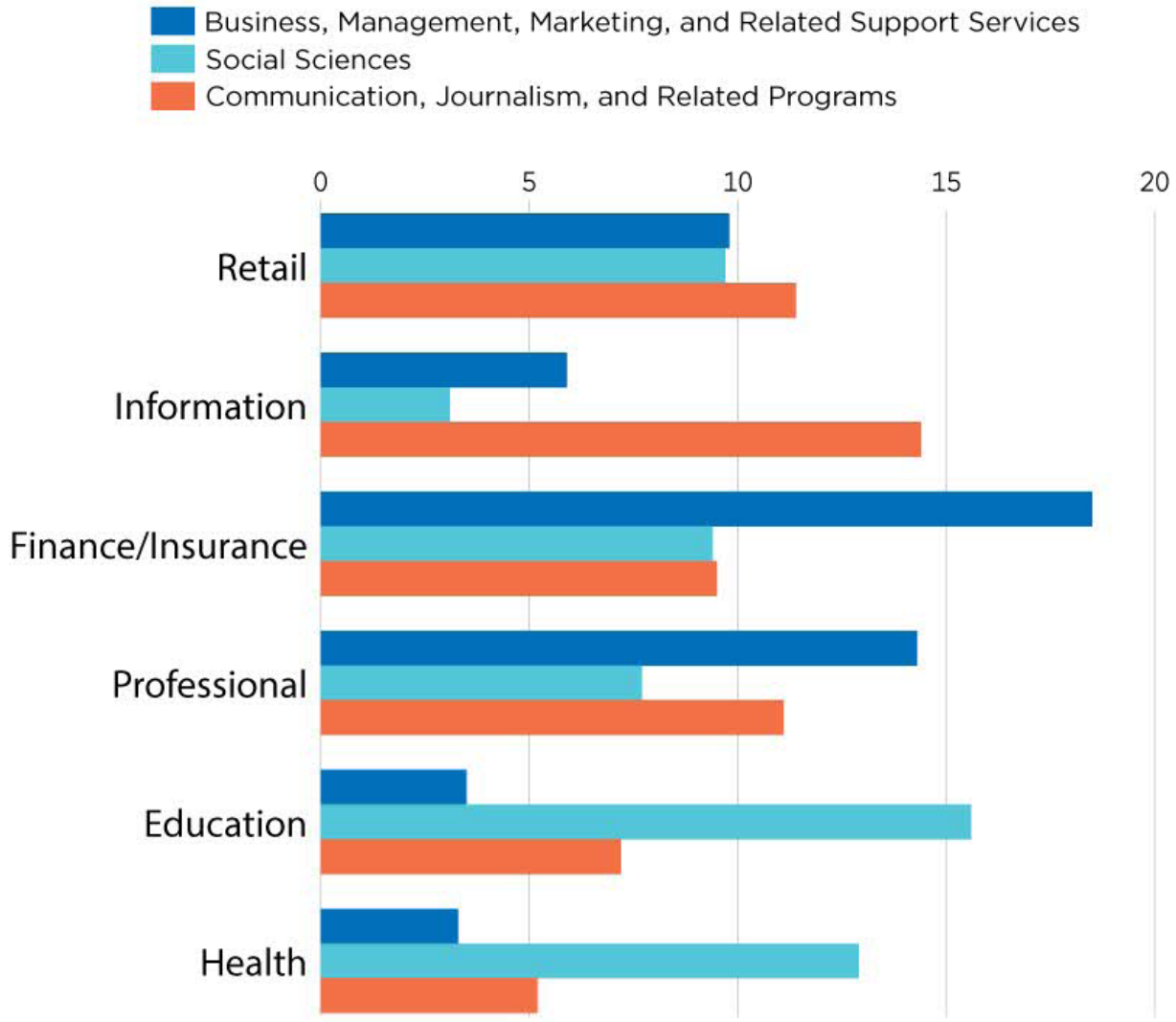
The graphs below look at industry employment for all bachelor's recipients in Colorado in three specific fields of study.

It's clear that graduates in communications are more likely to land jobs in professional services, information and retail industries while social science graduates are more likely to end up in education and health.

Business majors are heavily concentrated in finance/insurance and professional services.

Important to the analysis of career paths, PSEO also measures how specific majors transition into highly-related fields.

Percentage of Graduates by Industry

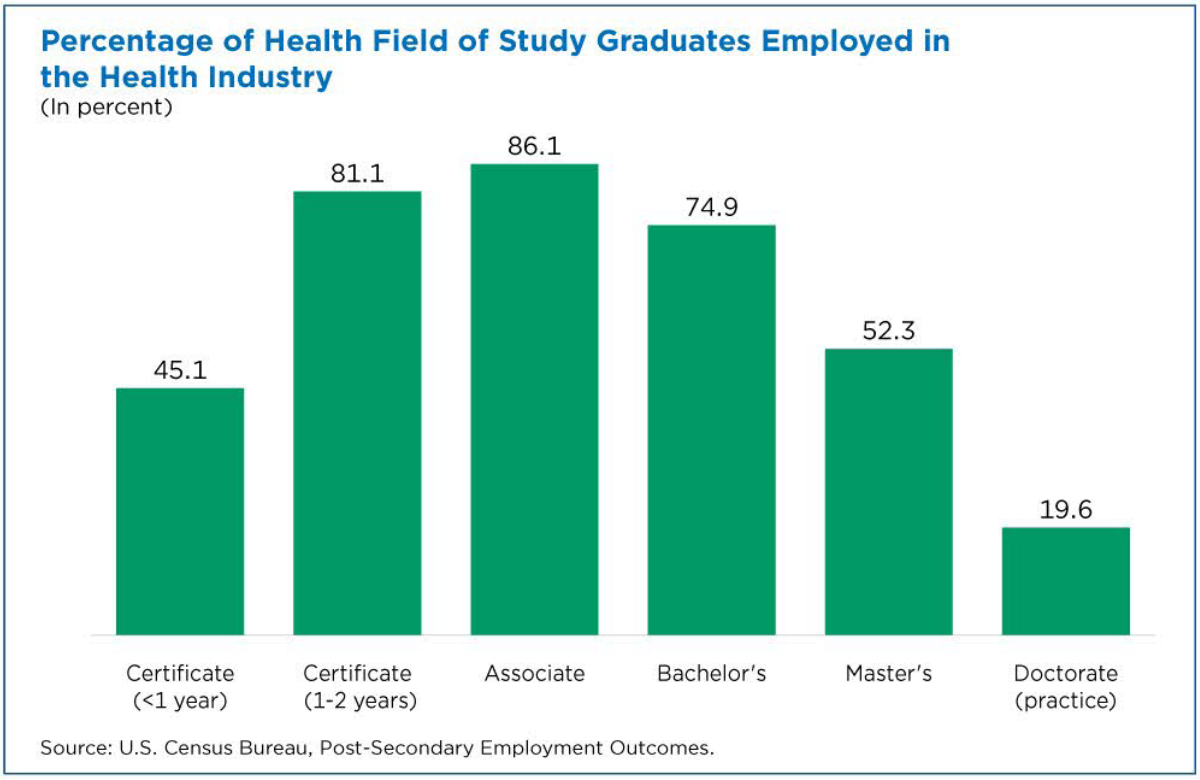


Source: U.S. Census Bureau, Post-Secondary Employment Outcomes.

The figure below measures the share of graduates from health programs who enter the health industry sector one year after graduation.

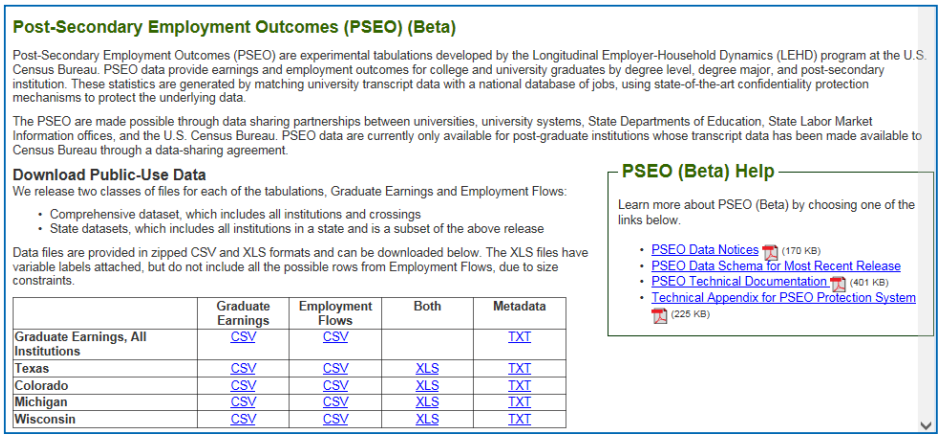
Surprisingly, individuals with master's degrees in health are much less likely to end up working in the health industry than those with shorter-term certificate and associates degrees.

Instead, master's graduates in health also end up in Education (22.2%) and Public Administration (7.2%).



All these tabulations are available on the PSEO website for download, as well as additional documentation. The Census Bureau is currently developing a data visualization tool for the employment flows data, which is scheduled for release in the coming months.

https://lehd.ces.census.gov/data/pseo_beta.html



Source: https://census.gov/library/stories/2019/08/where-do-college-graduates-go-for-jobs.html?utm_campaign=20190809msacos1ccstors&utm_medium=email&utm_source=govdelivery

Careers by the Numbers

Nonmetropolitan Areas Had Over Half a Million STEM Jobs in May 2018

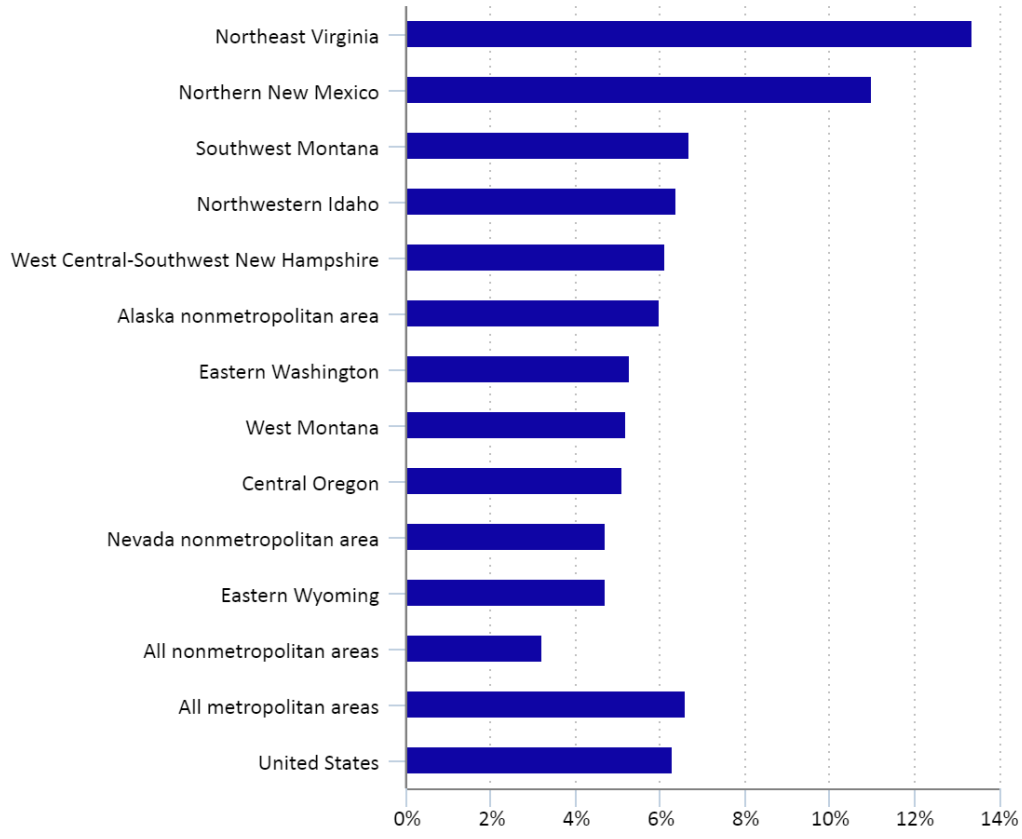
Northern Virginia Tops Graph at 13.4%

Science, technology, engineering, and mathematics (STEM) occupations made up 3.2 percent of employment in nonmetropolitan areas in May 2018, compared with 6.3 percent of employment nationally and 6.6 percent of employment in metropolitan areas. Although nonmetropolitan areas generally had lower shares of STEM employment, there were more than 530,000 STEM jobs in these areas. The annual mean wage for STEM occupations in nonmetropolitan areas was $71,720, compared with $93,070 nationally and $94,160 in metropolitan areas.

Some nonmetropolitan areas had above-average shares of STEM jobs. For example, STEM occupations made up 13.4 percent of employment in the Northeast Virginia nonmetropolitan area and 11.0 percent of employment in the Northern New Mexico nonmetropolitan area. By comparison, in the two metropolitan areas with the highest shares of STEM occupations—California-Lexington Park, Maryland, and San Jose-Sunnyvale-Santa Clara, California—STEM jobs made up 27.4 percent and 21.0 percent of employment, respectively.

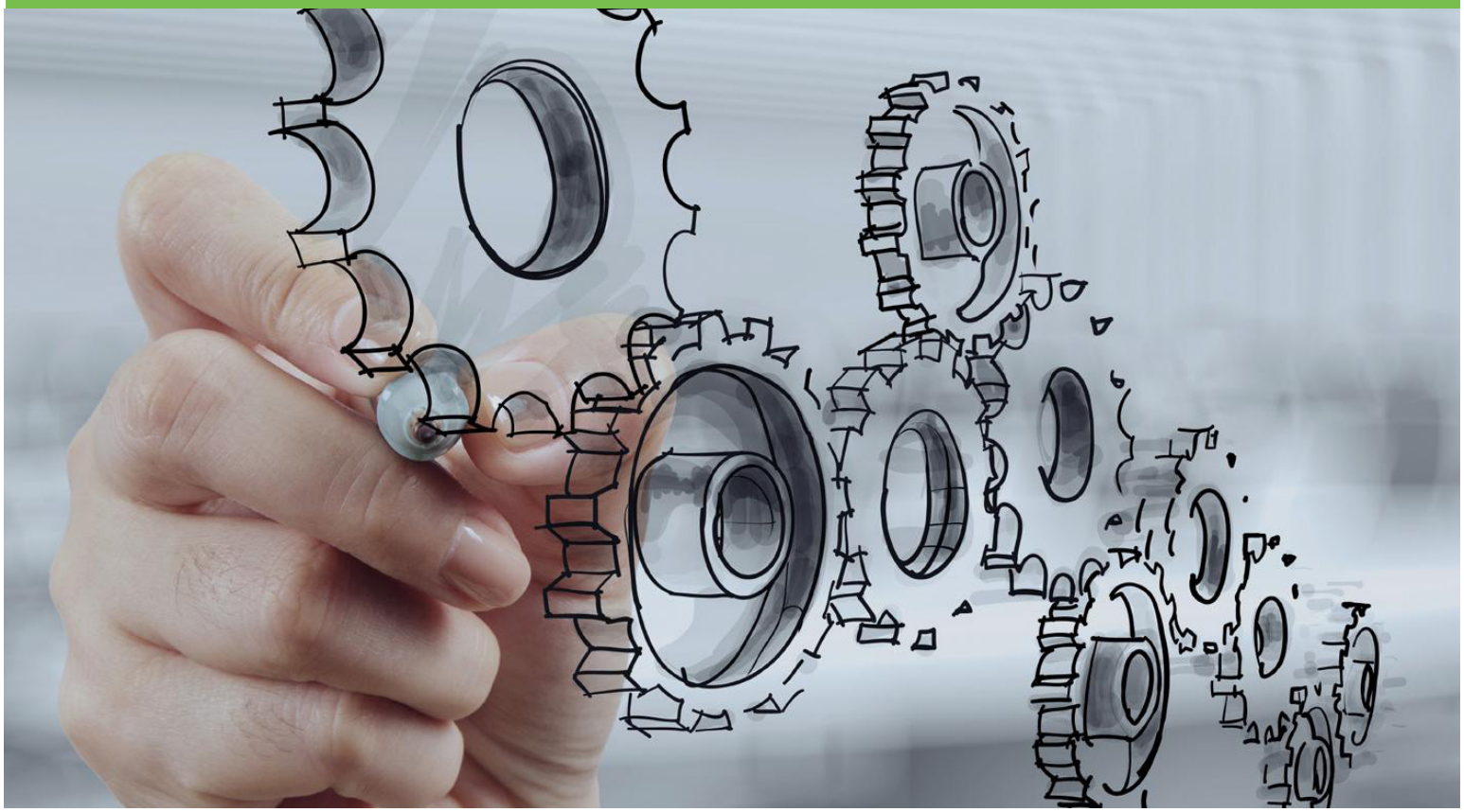
The composition of STEM jobs varied by area. For example, the largest individual STEM occupations in the Northeast Virginia nonmetropolitan area included computer and information research scientists, electrical engineers, and mechanical engineers. Physicists, nuclear engineers, and forest and conservation technicians were among the largest STEM occupations in the Northern New Mexico nonmetropolitan area.

Nonmetropolitan areas with the highest employment shares of STEM occupations, May 2018



https://www.bls.gov/opub/ted/2019/nonmetropolitan-areas-had-over-half-a-million-stem-jobs-in-may-2018.htm

Career In-Depth Focus



Material Engineer

What Materials Engineers Do

Materials engineers work with metals, ceramics, and plastics to create new materials.

Materials engineers develop, process, and test materials used to create a range of products, from computer chips and aircraft wings to golf clubs and biomedical devices. They study the properties and structures of metals, ceramics, plastics, composites, nanomaterials (extremely small substances), and other substances in order to create new materials that meet certain mechanical, electrical, and chemical requirements. They also help select materials for specific products and develop new ways to use existing materials.

Duties

Materials engineers typically do the following:

- Plan and evaluate new projects, consulting with other engineers and managers as necessary
- Prepare proposals and budgets, analyze labor costs, write reports, and perform other managerial tasks
- Supervise the work of technologists, technicians, and other engineers and scientists
- Design and direct the testing of processing procedures
- Monitor how materials perform and evaluate how they deteriorate
- Determine causes of product failure and develop ways of overcoming such failure

- Evaluate technical specifications and economic factors relating to the design objectives of processes or products
- Evaluate the impact of materials processing on the environment

Materials engineers create and study materials at the atomic level. They use computers to understand and model the characteristics of materials and their components. They solve problems in several different engineering fields, such as mechanical, chemical, electrical, civil, nuclear, and aerospace.

Materials engineers may specialize in understanding specific types of materials. The following are examples of types of materials engineers:

Ceramic engineers develop ceramic materials and the processes for making them into useful products, from high-temperature rocket nozzles to glass for LCD flat-panel displays.

Composites engineers develop materials with special, engineered properties for applications in aircraft, automobiles, and related products.

Metallurgical engineers specialize in metals, such as steel and aluminum, usually in alloyed form with additions of other elements to provide specific properties.

Plastics engineers develop and test new plastics, known as polymers, for new applications.

Semiconductor processing engineers apply materials science and engineering principles to develop new microelectronic materials for computing, sensing, and related applications.

Work Environment

Materials engineers may work in laboratories or industrial settings to observe the results of their research and development.

Materials engineers held about 27,700 jobs in 2018. The largest employers of materials engineers were as follows:

Transportation equipment manufacturing	16%
Engineering services	10%
Computer and electronic product manufacturing	9%
Research and development in the physical, engineering, and life sciences	9%
Primary metal manufacturing	8%

Materials engineers often work in offices where they have access to computers and design equipment. Others work in factories or research and development laboratories. Materials engineers may work in teams with scientists and engineers from other backgrounds.

How to Become a Materials Engineer

Materials engineers plan and evaluate new projects, consulting with others as necessary.

Materials engineers must have a bachelor's degree in materials science and engineering or in a related engineering field. Completing internships and cooperative engineering programs while in school can be helpful in getting a position as a materials engineer.

Education

Students interested in studying materials engineering should take high school courses in math, such as algebra, trigonometry, and calculus; in science, such as biology, chemistry, and physics; and in computer programming.

Entry-level jobs as a materials engineer require a bachelor's degree. Bachelor's degree programs include classroom and laboratory work focusing on engineering principles.

Some colleges and universities offer a 5-year program leading to both a bachelor's and master's degree. A graduate degree allows an engineer to work as a postsecondary teacher or to do research and development.

Many colleges and universities offer internships and cooperative programs in partnership with industry. In these programs, students gain practical experience while completing their education.

Many engineering programs are accredited by ABET. Some employers prefer to hire candidates who have graduated from an accredited program. A degree from an ABET-accredited program is usually necessary to become a licensed professional engineer.

Important Qualities

Analytical skills. Materials engineers often work on projects related to other fields of engineering. They must determine how materials will be used and how they must be structured to withstand different conditions.

Math skills. Materials engineers use the principles of calculus and other advanced topics in math for analysis, design, and troubleshooting in their work.

Problem-solving skills. Materials engineers must understand the relationship between materials' structures, their properties, how they are made, and how these factors affect the products they are used to make. They must also figure out why a product might have failed, design a solution, and then conduct tests to make sure that the product does not fail again. These skills involve being able to identify root causes when many factors could be at fault.

Speaking skills. While working with technicians, technologists, and other engineers, materials engineers must state concepts and directions clearly. When speaking with managers, these engineers must also communicate engineering concepts to people who may not have an engineering background.

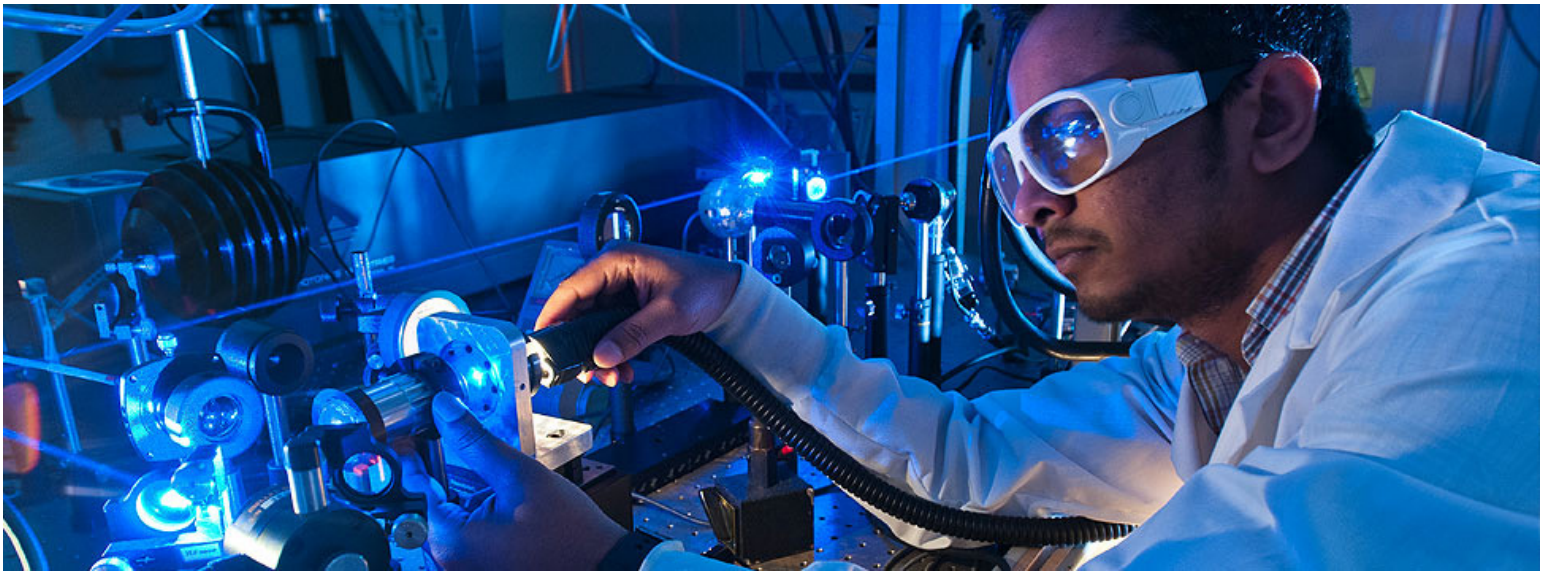
Writing skills. Materials engineers must write plans and reports clearly so that people without a materials engineering background can understand the concepts.

Licenses, Certifications, and Registrations

Licensure for materials engineers is not as common as it is for other engineering occupations, nor it is required for entry-level positions. A Professional Engineering (PE) license, which allows for higher levels of leadership and independence, can be acquired later in one's career. Licensed engineers are called professional engineers (PEs). A PE can oversee the work of other engineers, sign off on projects, and provide services directly to the public. State licensure generally requires

- A degree from an ABET-accredited engineering program
- A passing score on the Fundamentals of Engineering (FE) exam
- Relevant work experience, typically at least 4 years
- A passing score on the Professional Engineering (PE) exam

The initial FE exam can be taken after earning a bachelor's degree. Engineers who pass this exam are commonly called engineers in training (EITs) or engineer interns (EIs). After meeting work experience requirements, EITs and EIs can take the second exam, called the Principles and Practice of Engineering (PE).



Each state issues its own licenses. Most states recognize licensure from other states, as long as the licensing state's requirements meet or exceed their own licensure requirements. Several states require continuing education for engineers to keep their licenses.

Certification in the field of metallography, the science and art of dealing with the structure of metals and alloys, is available through ASM International and other materials science organizations.

Additional training in fields directly related to metallurgy and materials' properties, such as corrosion or failure analysis, is available through ASM International.

Other Experience

During high school, students can attend engineering summer camps to see what these and other engineers do. Attending these camps can help students plan their coursework for the remainder of their time in high school.

Advancement

Junior materials engineers usually work under the supervision of experienced engineers. In large companies, new engineers may receive formal training in classrooms or seminars. As engineers gain knowledge and experience, they move on to more difficult projects where they have greater independence to develop designs, solve problems, and make decisions.

Eventually, materials engineers may advance to become technical specialists or to supervise a team of engineers and technicians. Many become engineering managers or move into other managerial positions or sales work. An engineering background is useful in sales because it enables sales engineers to discuss a product's technical aspects and assist in product planning, installation, and use. For more information, see the profiles on architectural and engineering managers and sales engineers.

Pay

Note: All Occupations includes all occupations in the U.S. Economy.
Source: U.S. Bureau of Labor Statistics, Occupational Employment Statistics

The median annual wage for materials engineers was $92,390 in May 2018. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than $57,110, and the highest 10 percent earned more than $148,110.

In May 2018, the median annual wages for materials engineers in the top industries in which they worked were as follows:

Research and development in the physical, engineering, and life sciences	$107,840
Transportation equipment manufacturing	100,030
Computer and electronic product manufacturing	94,020
Engineering services	90,630
Primary metal manufacturing	81,170

Most materials engineers work full time. Some materials engineers work more than 40 hours per week.

Wages for Materials Engineers in VIRGINIA

Location	Pay Period	2018				
		10%	25%	Median	75%	90%
United States	Hourly	$27.46	$34.60	$44.42	$57.39	$71.21
	Yearly	$57,110	$71,960	$92,390	$119,360	$148,110
Virginia	Hourly	$28.96	$34.98	$44.60	$58.57	$72.03
	Yearly	$60,240	$72,760	$92,770	$121,830	$149,830
Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area	Hourly	$36.11	$48.18	$60.61	$71.94	$78.94
	Yearly	$75,100	$100,210	$126,070	$149,630	$164,200
Virginia Beach-Norfolk-Newport News, VA-NC Metro Area	Hourly	$31.36	$36.93	$48.73	$64.13	$73.86
	Yearly	$65,220	$76,820	$101,360	$133,390	$153,620
Richmond, VA Metro Area	Hourly	$25.87	$31.77	$39.70	$51.17	$66.94
	Yearly	$53,810	$66,080	$82,570	$106,440	$139,230

Note: Data not available for other Virginia MSAs.

Job Outlook

Note: All Occupations includes all occupations in the U.S. Economy.
Source: U.S. Bureau of Labor Statistics, Employment Projections program

Employment of materials engineers is projected to show little or no change from 2018 to 2028. Materials engineers will be needed to design new materials for use both in traditional industries, such as aerospace manufacturing, and in industries focused on new medical or scientific products. However, most materials engineers work in manufacturing industries, many of which are expected to have declines or little change in employment.

Job Prospects

Prospects should be best for applicants who gained experience by participating in internships or co-op programs while in college.

Computer modeling and simulations, rather than extensive and costly laboratory testing, are increasingly being used to predict the performance of new materials. Thus, those with a background in computer modeling should have better employment opportunities.

National	Employment		Percent Change	Projected Annual Job Openings*
	2016	2026		
United States	27,000	27,500	2%	1,900
Virginia	500	510	+1%	40

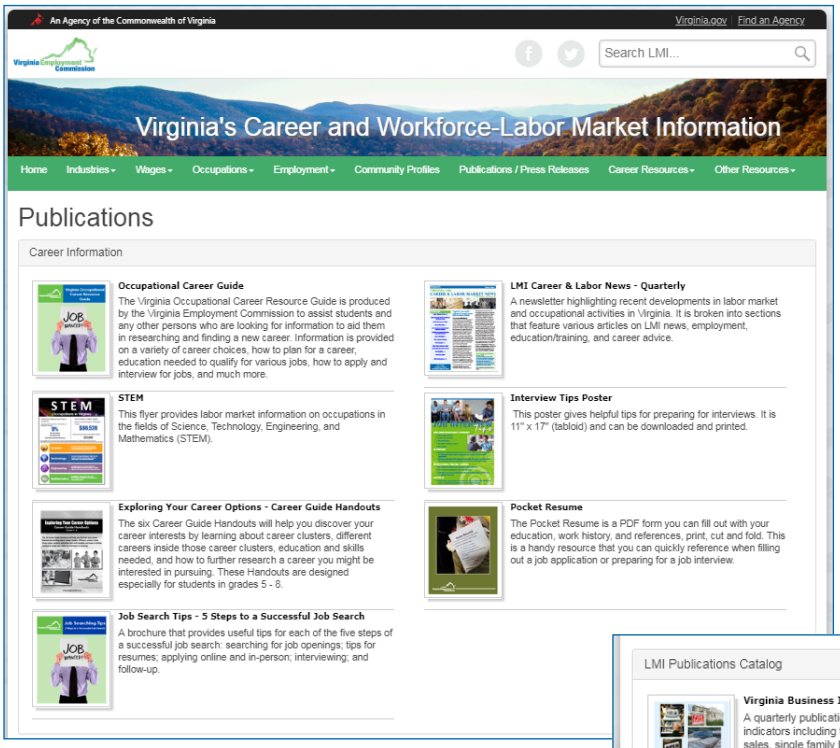
*Projected Annual Job Openings refers to the average annual job openings due to growth and net replacement.

Sources: https://www.bls.gov/ooh/architecture-and-engineering/materials-engineers.htm#tab-1; https://www.onetonline.org/link/summary/17-2131.00

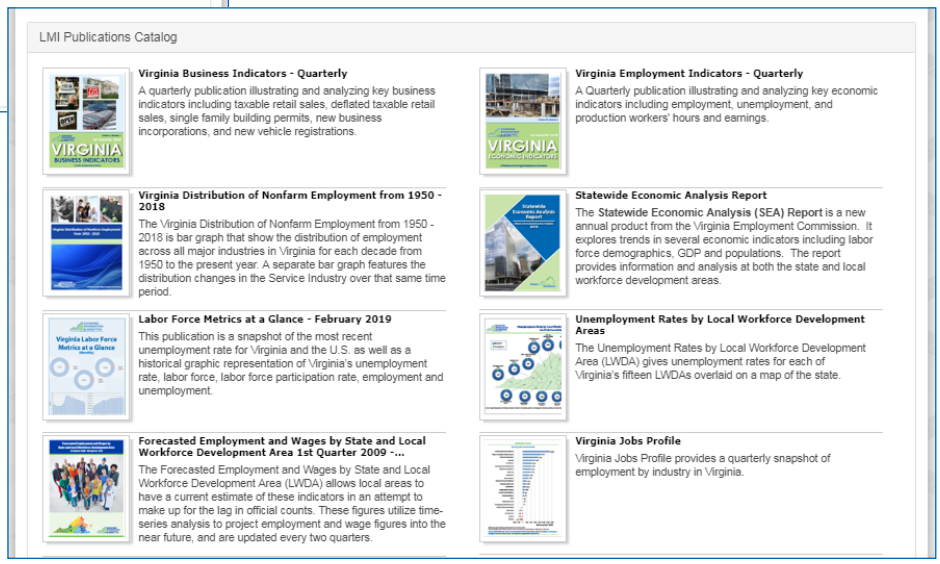
Career and Labor Market Information Publications

Explore Career possibilities on our Career and Labor Market Information Website at:

https://virginiaworks.com/publications



The Virginia Employment Commission Labor Market Information division is proud to offer a number of quality publications available to view and download at on our website.



These products provide labor market information, job tips, career planning, and more.

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