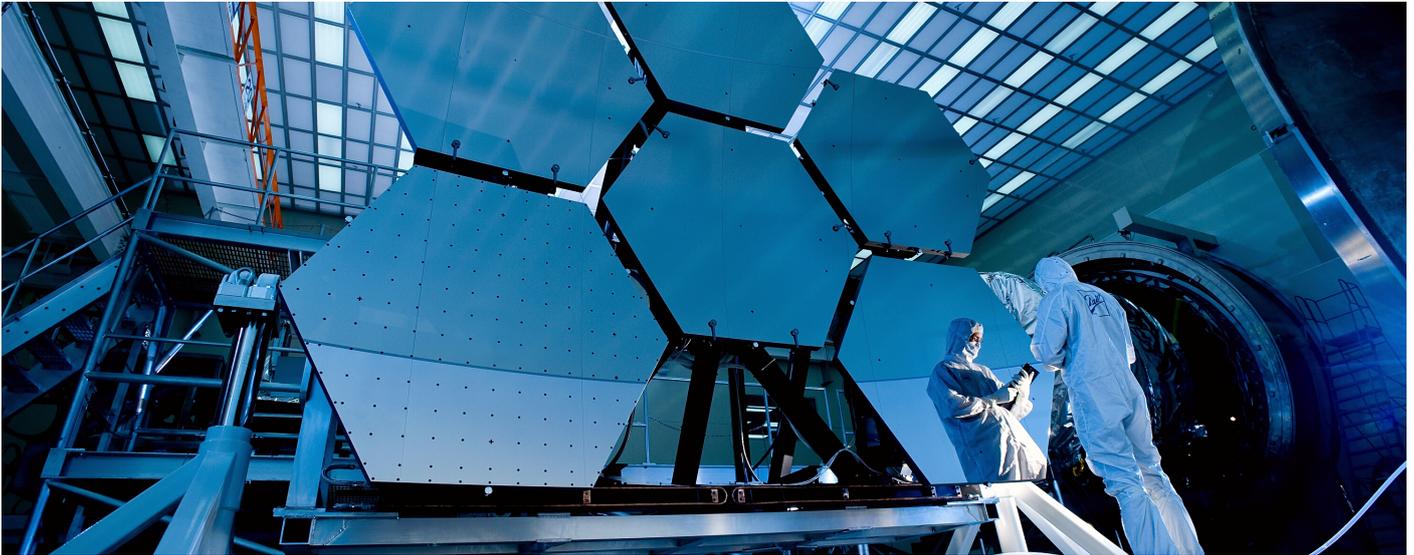


# SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS (STEM)

## ANALYZING EDUCATION, EMPLOYMENT & EARNING DATA

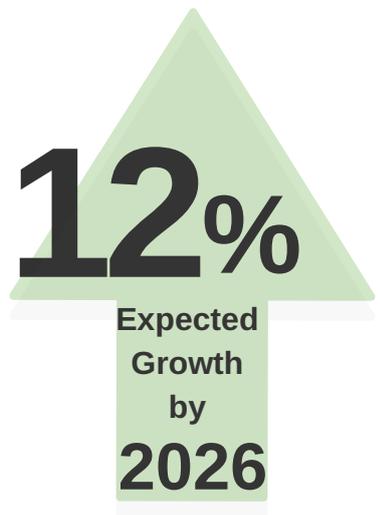


This analysis of the Science, Technology, Engineering, and Mathematics (STEM) cluster in the Commonwealth highlights important information for each of its career pathways—Engineering & Technology; and Science & Mathematics.



What trends do we currently see? What trends may we anticipate?

- From 2016 to 2026, the STEM cluster is expected to experience 12 percent job growth in the Commonwealth, adding nearly 8,000 new positions. This rate is slightly greater than the average statewide growth rate of 10 percent.
- Among all occupations in the cluster, Statisticians are projected to experience the highest growth in the cluster through 2026 (43%), while Social Scientists and Related Workers, All Other, are expected to see the greatest number of annual job openings (610).
- In 2016, nearly 40 percent of the STEM occupations were located in Northern Virginia (LWIA XI and XII). Northern Virginia will add approximately 4,100 new positions in the STEM cluster between 2016 and 2026.



**12%**  
Expected  
Growth  
by  
**2026**



## EDUCATION

Figure 1 shows the predominant level of education and training in each pathway. Education data was determined by Trailblazers based on U.S. Bureau of Labor Statistics occupational education and training data. The percentages in the graph below reflect the number of occupations, not the number of workers. In the STEM Career Cluster, all occupations are predominated by individuals with a Bachelor's degree or more. Only Architectural and Engineering Managers in the Engineering and Technology pathway need work experience in addition to the degree.

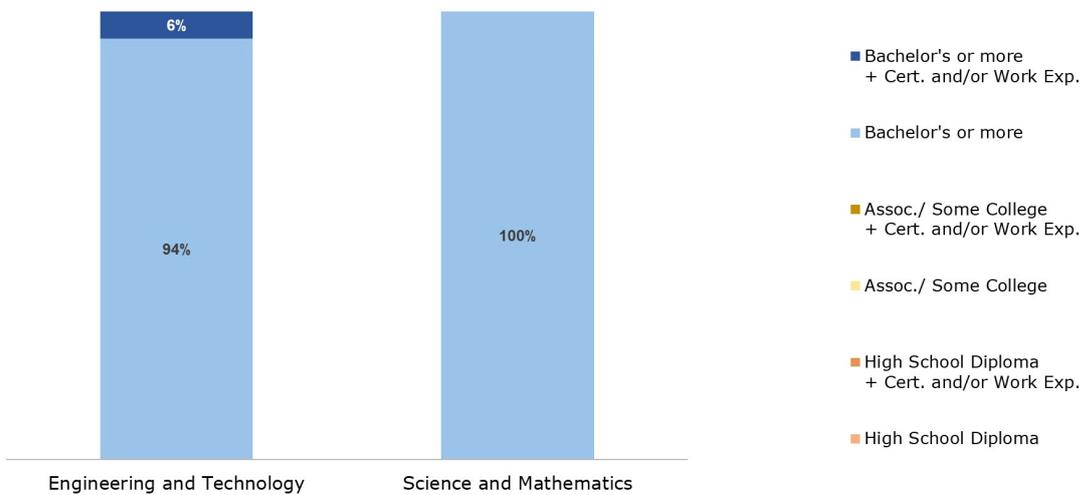


Figure 1: Predominant Education Level for STEM, 2016-2026



## EMPLOYMENT

Figure 2 compares the estimated 2016 employment for each pathway to projected 2026 employment levels. Data are provided by the Virginia Employment Commission.

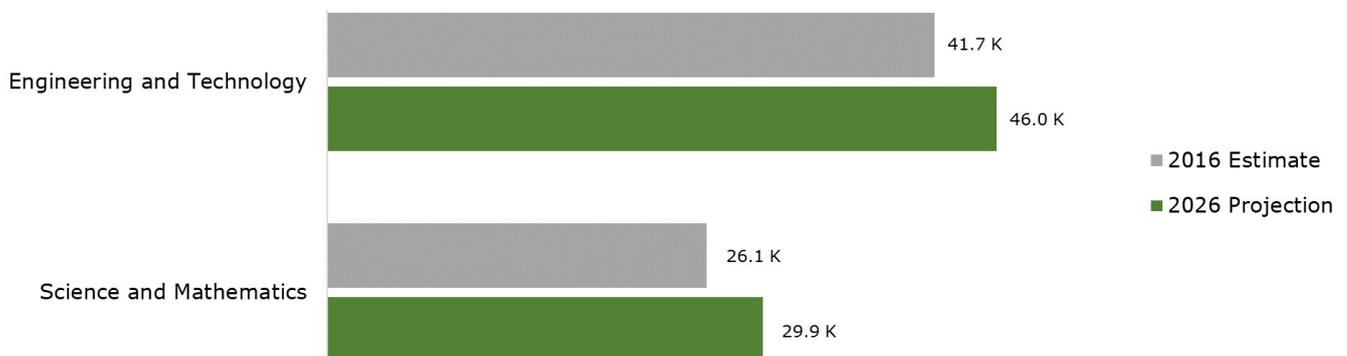


Figure 2: Employment in Virginia for the STEM Cluster, 2016-2026



# EARNING AND GROWTH

Figure 3 presents the size and median wages of the occupations in each pathway with the highest projected percentage of growth. Wage data are provided by the U.S. Bureau of Labor Statistics Occupational Employment Statistics program.

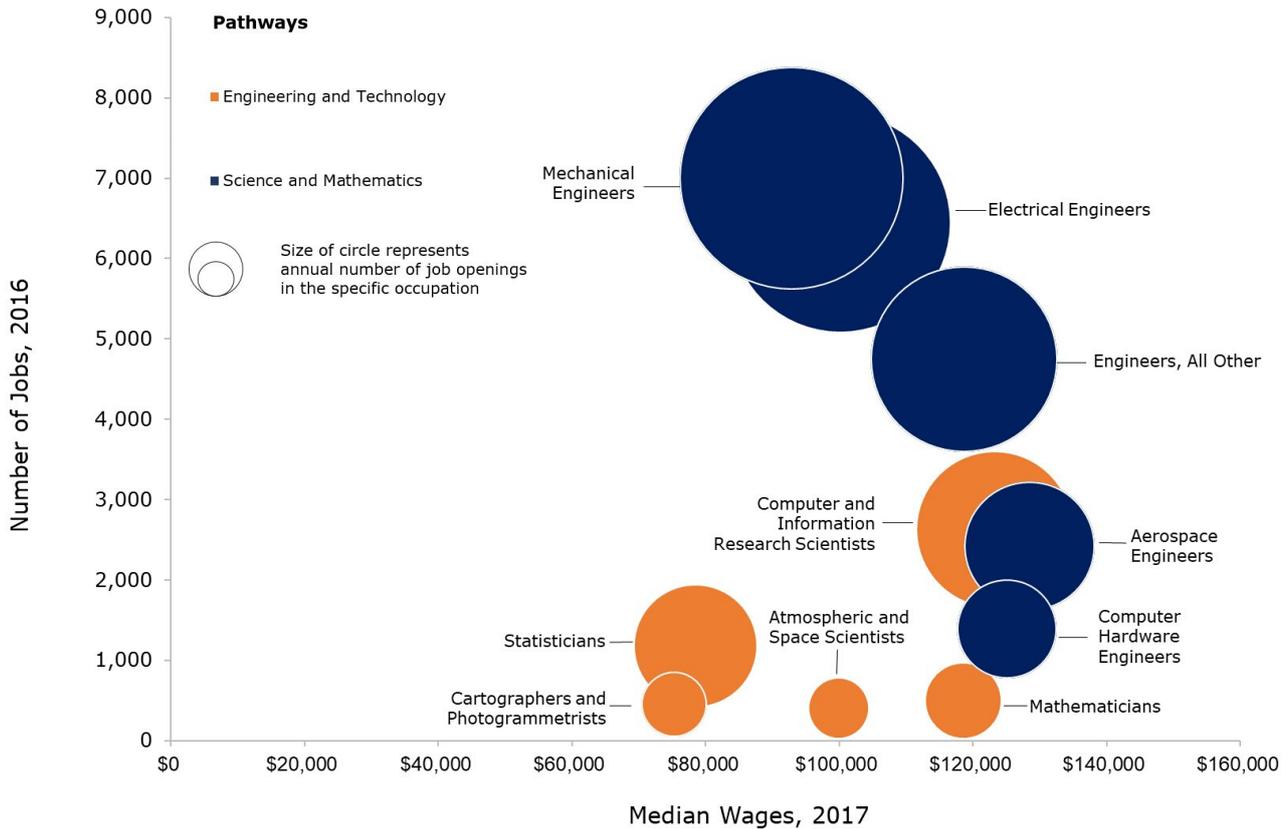


Figure 3: Earning and Growth for Selected Occupations in Virginia, 2016-2026



## Employment Growth by LWIA

In the STEM cluster, the following Labor Workforce Investment Areas (LWIAs) will experience higher occupational growth rates than the state average:

- Northern Virginia
- Hampton Roads



## Nontraditional Occupations

Nontraditional Occupations for Females

- Architectural and Engineering Managers
- Aerospace Engineers
- Chemical Engineers
- Computer Hardware Engineers
- Electrical and Electronic Engineers
- Mechanical Engineers
- Engineers, All Others

