

MANUFACTURING

ANALYZING EDUCATION, EMPLOYMENT AND EARNINGS DATA



This analysis of Virginia's Manufacturing cluster highlights important information about each of its six career pathways – Production; Manufacturing Production Process Development; Maintenance, Installation, and Repair; Quality Assurance; Logistics and Inventory Control; and Health, Safety, and Environmental Assurance.



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

- The Manufacturing cluster in Virginia is expected to have 0.9 percent fewer jobs available in 2028 compared to 2018, making it the only career cluster in Virginia projected to experience job contraction.
- There were approximately 179,200 jobs classified in Virginia's Manufacturing cluster in 2018. About 1,600 fewer jobs are projected to exist within the cluster by 2028; however, approximately 19,400 job openings are expected annually within Virginia.
- The Production pathway is by far the largest in the Manufacturing cluster, consisting of about 96,000 jobs in 2018 – a little more than half (54%) of all jobs in the Manufacturing cluster.
- Five occupations in Virginia's Manufacturing cluster are expected to experience job growth of 10 percent or more through 2028 – Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic (19.5%); Ophthalmic Laboratory Technicians (15.0%); Etchers and Engravers (11.1%); Medical Appliance Technicians (10.9%); and Dental Laboratory Technicians (10.1%).

-0.9%

**Expected
percent
employment
change by
2028**



EDUCATION

Figure 1 shows the predominant education levels of occupations by CTE career pathway. The percentages reflect the number of occupations at each educational level within a pathway, not the number of workers. The predominant level of education for each occupation is determined by Trailblazers based on national-level U.S. Bureau of Labor Statistics data.

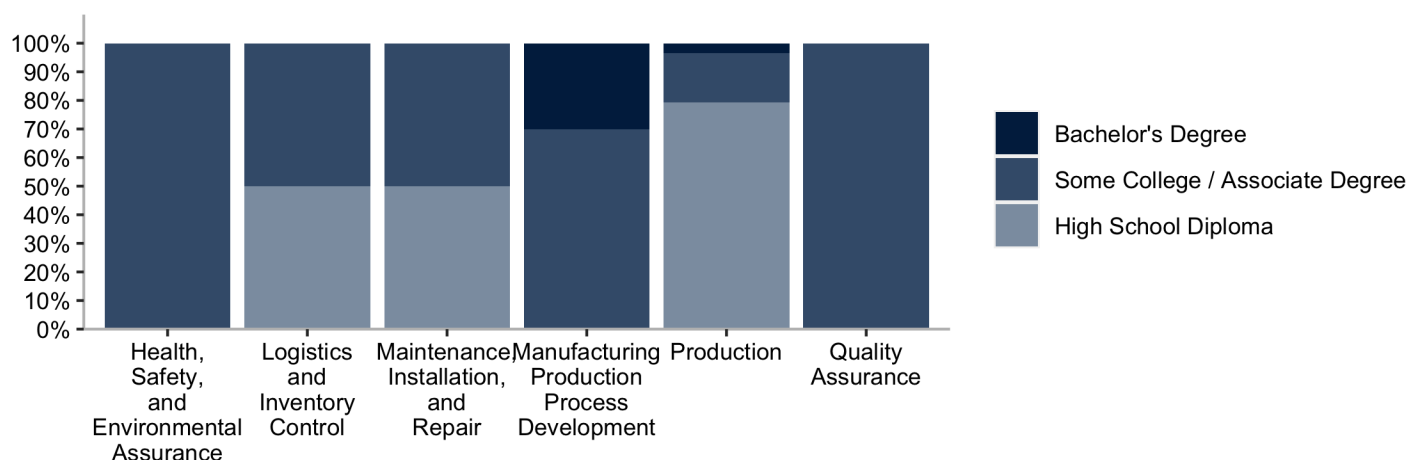


Figure 1: Predominant Education Levels in Manufacturing, 2018-2028



EMPLOYMENT

Figure 2 compares the estimated 2018 number of jobs in Virginia within each CTE career pathway to the projected 2028 number of jobs. Data are provided by the Virginia Employment Commission.

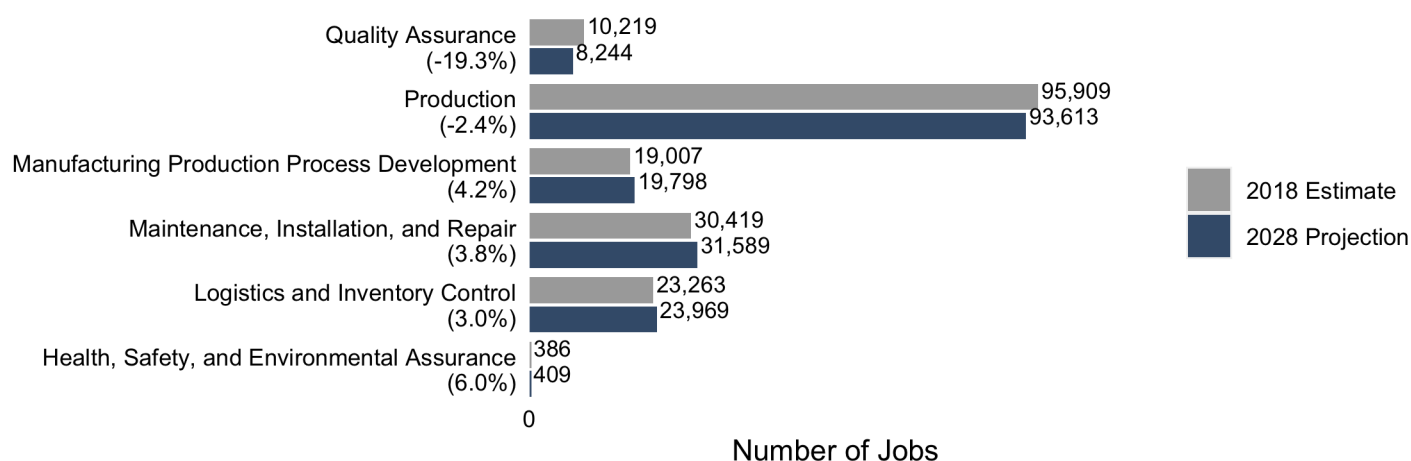


Figure 2: Number of Jobs in Virginia's Manufacturing Cluster, 2018-2028
 (Projected percent change in number of jobs by pathway in parentheses)



EARNINGS AND GROWTH

Figure 3 presents the median 2018 annual incomes of occupations in Virginia by CTE career pathway. Data are provided by the Virginia Employment Commission.

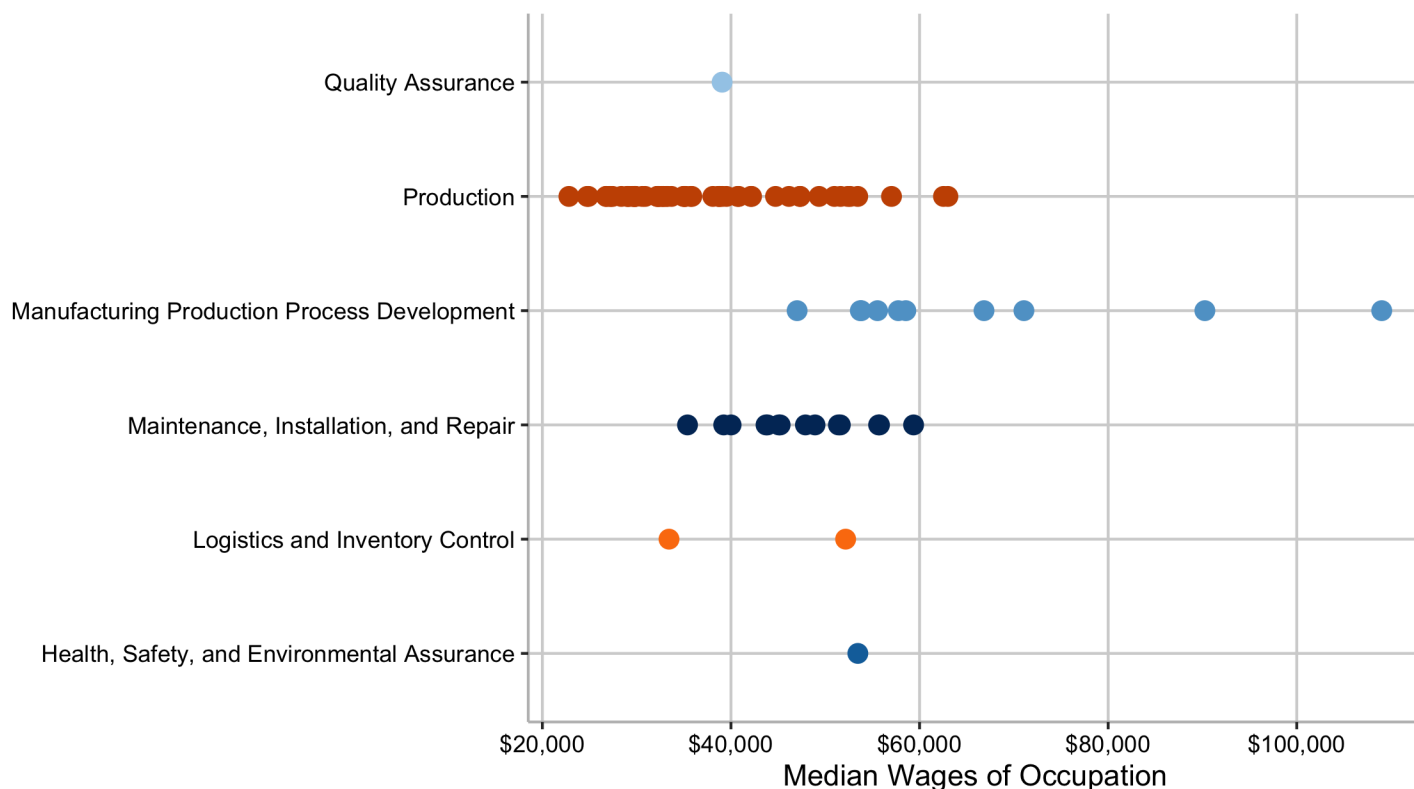


Figure 3: Median 2018 Annual Wages of Occupations in Virginia by Pathway



Employment Growth by LWDA

In the Manufacturing cluster, the following Local Workforce Development Areas (LWDAs) are projected to experience occupational growth rates higher than the -0.9% statewide average:

- Alexandria/Arlington (8.1%)
- Northern Virginia (4.8%)
- Bay Consortium (1.0%)
- Hampton Roads (-0.7%)
- Piedmont Workforce Network (-0.8%)



Nontraditional Occupations

Nontraditional Occupations for Females

- Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic
- Cabinetmakers and Bench Carpenters
- Electrical and Electronics Engineering Technicians

Nontraditional Occupations for Males

- None