

# Advanced Manufacturing

**A**dvanced manufacturing stands as a pillar of the economy, encompassing critical sectors such as aerospace, automotive, biotechnology, shipbuilding, semiconductors, and nuclear energy, each essential for bolstering national competitiveness and ensuring economic security. To effectively adjust to a continuously changing environment influenced by technology, automation, and artificial intelligence, employers are exploring ways to adjust their workforce strategies such as enhancing training, investing in upskilling, and refining their recruitment approaches to align with these changes.

Registered Apprenticeship is a proven solution for employers to recruit, train, and retain world-class manufacturing talent. In 2025, there were 97,500 registered apprentices served in the advanced manufacturing industry, a 20 percent increase over the past 5 years.<sup>1</sup>

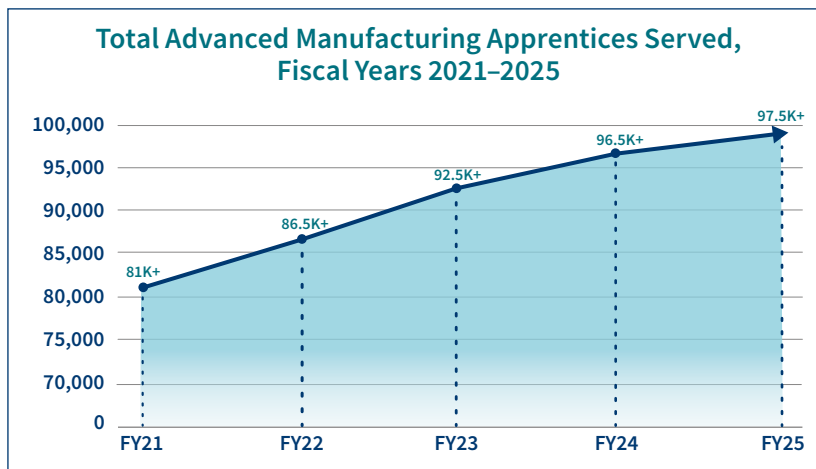
## THE NEED FOR REGISTERED APPRENTICESHIP IN ADVANCED MANUFACTURING

The advanced manufacturing industry is important to our country's economic growth. The challenge? Not having enough staff is slowing companies' efforts to expand, innovate, and excel. Advanced manufacturing employers have reported they:

- ▶ Replace an aging workforce of highly skilled and experienced workers.
- ▶ Attract talent to new jobs.
- ▶ Invest in talent that can keep up with the latest technology.
- ▶ Implement training models that develop talent.

The good news? There is a proven solution to meet employers' talent challenges:

**Registered Apprenticeship** is a proven and industry-driven training model that can provide a critical talent pipeline for manufacturers.



In 2025, there were over

**97,500**

**Apprentices Served**

in advanced manufacturing occupations

## SNAPSHOT: EXAMPLES OF ADVANCED MANUFACTURING-RELATED APPRENTICEABLE OCCUPATIONS

- ▶ Aerospace Engineer
- ▶ CNC Machine Operator
- ▶ Mechanical Engineering Technician
- ▶ Mechatronics Technician
- ▶ Precision Machinist
- ▶ Tool and Die Maker
- ▶ Industrial Manufacturing Technician
- ▶ Maintenance Mechanic
- ▶ Robotics Technician
- ▶ Quality Technician

## REGISTERED APPRENTICESHIP: THE TOP TALENT DEVELOPMENT SOLUTION FOR EMPLOYERS

Thousands of companies across the U.S. and the world use the Registered Apprenticeship training model to recruit, train, and retain workers with the right skills. Registered Apprenticeship has been the most useful training model for improving companies' performance and competitiveness.

### WHAT IS REGISTERED APPRENTICESHIP?

Registered Apprenticeship is an industry-driven, high-quality career pathway through which employers can develop and prepare their future workforce, and individuals can obtain paid work experience with a mentor, and receive progressive wage increases, classroom instruction, and a portable, nationally recognized credential. Registered Apprenticeships are industry-vetted and approved by the U.S. Department of Labor or a State Apprenticeship Agency.

*“Through customized training, our apprentices build their skill sets working directly with our equipment, enabling them to become very efficient in supporting the Mack Trucks’ manufacturing facility as they progress through and complete the program.”—Thomas Gombos, Maintenance Manager, Mack Trucks, Lehigh Valley Operations*



### HOW CAN REGISTERED APPRENTICESHIP HELP COMPANIES?

Advanced manufacturing employers gain several benefits from implementing Registered Apprenticeship programs. Through Registered Apprenticeship, employers will:

- ▶ Customize training to meet the company's needs.
- ▶ Recruit and develop a highly skilled workforce.
- ▶ Improve capacity and earnings.
- ▶ Reduce turnover, improve loyalty, and retain top talent.
- ▶ Invest in the community.
- ▶ Create effective and efficient training practices.
- ▶ Improve the company's current workforce skills.
- ▶ Provide pathways for career advancement.
- ▶ Access potential funding opportunities and connect with a network of apprenticeship experts and other industry, educational, and workforce partners.

Partner with the Office of Apprenticeship or State Apprenticeship Agency. By partnering, companies can access a nationwide network of expertise, customer service, and support. Our apprenticeship team creates business solutions and helps business get workforce results quickly.

<sup>1</sup> The numbers represent apprentices in occupations associated with O\*NET Online's published Manufacturing category and further vetted by the Office of Apprenticeship and advanced manufacturing industry intermediaries.

## Explore Registered Apprenticeship Today!

Want to learn more? Visit the U.S. Department of Labor's one-stop source for all things apprenticeship: [www.apprenticeship.gov](http://www.apprenticeship.gov) or email us at [apprenticeship@dol.gov](mailto:apprenticeship@dol.gov).

**APPRENTICESHIPUSA™**  
★★★