



# Advanced Manufacturing Competency Model

The Skills Certification System is grounded in the Advanced Manufacturing Competency Model. The model, built by manufacturers, for manufacturers, and in partnership with the Department of Labor, serves as a roadmap of the skills needed by workers entering and then advancing in careers across the manufacturing economy.



**Occupation-Related:** High-demand occupations are matched with critical industry certifications in such areas as machining, welding, fabrication, automation, fluid power, mechatronics, transportation/distribution, and logistics. At the top of the model are managerial and specialty occupations, including engineering.

**Core Technical:** Core technical skills that impact the bottom line include: safety, quality and measurement, maintenance installation and repair, production, and sustainable manufacturing.

**Foundational:** Basic skills that cut across all sectors in manufacturing include:

- >> **Workplace competencies:** Do workers use critical thinking skills, work in teams, and have problem solving skills?
- >> **Basic applied skills in reading, writing, math, and locating information:** Can workers communicate effectively, follow key instructions, and read manuals?
- >> **Personal effectiveness:** Will prospective employees show up on time, be dependable, and demonstrate initiative?

The Advanced Manufacturing Competency Model was developed because manufacturers recognized the need to agree on a common understanding of the entry- and technician-level skills required to be competitive in the global marketplace.

The framework does not replace or duplicate existing skill standards, but rather represents the core skills needed across the board for high-performance workers in today's advanced manufacturing environment.

To view manufacturing competencies, visit: [www.careeronestop.org/competencymodel](http://www.careeronestop.org/competencymodel)



## Manufacturing Pathways

The Skills Certification System links education and work through manufacturing-related industry certifications. Traditional education pathways (left column) and occupation/career pathways (right column) in manufacturing are aligned through “stackable” industry-based certifications (middle column).

Students completing programs of study earn not only an education certificate or degree, but also the relevant, transportable, industry-based certification. The curriculum in each program of study is aligned with the requirements of the industry certifications, ensuring graduates have the knowledge and skills required for jobs in today’s manufacturing economy.

In the manufacturing Skills Certification System, education, industry certification, and career pathways are aligned

