



# Point of View

## Moving Up the Line in Your Manufacturing Career

*As today's manufacturing environment becomes increasingly more technology-driven, the need for qualified workers becomes increasingly more critical. Position yourself for advancement within the manufacturing industry by strengthening your technical education and skills.*

Quick! What does the term "lights out" manufacturing mean to you? Here's a clue: Despite media reports to the contrary, it doesn't mean U.S. manufacturing is dead. In fact, just the opposite. "Lights out" manufacturing describes a futuristic vision of manufacturing in which computers largely run the show, with minimal human input.

And if you think *that* sounds the death knell for manufacturing employment, think again. Although manufacturing has become leaner and smarter, it is still a robust industry. In fact, the United States is the world's largest exporter of manufactured goods. If manufacturing was a separate economy, it would be the eighth largest in the world.

Hurt by an outdated reputation and a shortage of workers with technology backgrounds, this sector currently has a worker shortage that is expected to balloon in the next decade. In a survey by the Manufacturing Institute, eight in every 10 U.S. manufacturers report a "moderate to serious" shortage of qualified workers. The key word, of course, is qualified. To get ahead in this industry, prospective and current manufacturing workers must pay more attention to their education and skills. Today's manufacturing jobs are, more accurately, technology jobs.

Manufacturing has undergone a seismic shift. Once upon a time, it required physical strength and the ability to endure tough working conditions. Now, "advanced manufacturing" uses robotics, lasers, automated processes and computer interfaces—many requiring high-tech skills.

So, how do you land yourself one of these in-demand jobs?

- **Set a goal and create a plan.**  
Setting short-term and longer-term goals will help you identify the skills and knowledge you need to achieve those goals. Rather than drifting from one class to another, or acquiring training without some kind of plan, drafting a 'road map' will enable you to be more effective in developing your career.

- **Know where the shortages are.**  
In terms of job categories, manufacturers have a long list of positions they are having trouble filling. They include operators, craft workers, technicians, electricians, industrial engineers, computer specialists, machinists and entry-level production employees.
- **Understand the specific skills that are needed.**  
To advance in manufacturing today, you need to focus your education and skills development on math, science and technology. You will need to learn about engineering, electrical and mechanical systems, hydraulics, pneumatics or other technologies—depending on the job and industry you are currently in or are interested in. Or you may want to pursue even more specific education, such as food science, pharmaceuticals or opticals.
- **Develop those skills.**  
There are a number of organizations that offer skills training, including two- and four-year colleges, technical schools, workforce development agencies and manufacturing trade organizations. Many manufacturers, already challenged by a lack of skilled workers, offer in-house programs or will pay for classes. Also look for cross-training opportunities in your organization.
- **Don't overlook the soft skills.**  
In addition to technical skills, you need to understand how your workplace operates, from quality control to supply-chain management. The most promotable workers are those who make sure that everything they touch—literally or electronically—are free of defects and delivered on time. To that end, organizational, logistical and time management skills are valuable, along with other soft skills such as communication and flexibility.

Far from being a dying industry, manufacturing is alive and well, representing a great career opportunity with many jobs paying a good wage. And unless there is a huge influx of tech-savvy workers in this sector—soon—as many as 15 million jobs could go unfilled by 2020. Clearly, the time has never been better to join the exciting new world of technology-driven manufacturing!