

## Manufacturing Resources in the Midlands Area

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students, parents and educators in our community  
about careers in manufacturing.*



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# Be A Part Of...

## The Manufacturing Industry

A large industrial manufacturing facility with a worker in the foreground. The worker is wearing a dark blue polo shirt and dark pants, and is standing next to a stack of blue plastic crates. The background shows a complex of machinery, conveyor belts, and structural beams under a high ceiling with many lights.

# Career Opportunities in Midlands Manufacturing

Manufacturing is the production of the goods and machines that make up our day-to-day lives. As an industry, it touches virtually every part of our world. Consider just how many things are manufactured: what we drive, wear, eat, cook with and sleep on.

Manufacturing is a diverse and vibrant component of the job market here in the Midlands. Professional, skilled or entry level careers in production are diverse. They require reliable, mechanically inclined people who can perform highly accurate work. Midlands manufacturing in the 21st century requires people with diverse skills. Mathematics, science, strong communication skills, computer competence and the ability to quickly solve problems are all valuable assets for the manufacturing professional.

For those interested in working in the high-tech world of manufacturing, there are many challenging educational and training opportunities that begin in high school and can include two-year technical colleges, four-year universities or registered apprentice programs.

*“In order to remain a viable and cost effective manufacturing site in the U.S. today, it is imperative that employees continue to develop greater technical skill sets. Greater levels of automation are required to make production cost effective in the US. The demand is for employees willing to continuously improve and learn at every level within the organization. We encourage all of our employees to continue their education at technical and other schools to increase their value to themselves and the organization.”*

*—Michael McGinnis  
Bose*

As candidates pursue their education and training, career guidance professionals can help ascertain interests, skills and educational goals. The manufacturing industry itself is a vital component in training and career development. They routinely support registered apprenticeships, training, joint industry, and school programs that can lead to college credit or industry-recognized certification.

## Production

People in production either make parts for a product or they assemble them.

### Types of Occupations

- Assemblers
- Automated Manufacturing Technicians
- Calibration Technicians
- Electromechanical Equipment Operators
- Extruding & Drawing Machine Operators
- Computer Controlled Machine Operators
- Medical Appliance Makers

**Training**—Many secondary and post-secondary institutes offer certificate programs, associate degrees, or higher degrees appropriate to manufacturing specialties.

**Average Annual Earnings—**  
**\$22,500–\$42,000\***

## Manufacturing Process/ Production Development

A professional in this field may design the product or the manufacturing process. Others ensure manufacturing processes produce products that meet or exceed both the company's and the consumer's expectations. In addition, they constantly monitor the process and the materials used to produce a product.

### Types of Occupations

- Design Engineers
- Industrial Engineers
- Manufacturing Engineers
- Power Generating & Reactor Plant Operators
- Precision Inspectors, Testers, & Graders
- Process Improvement Technicians
- Production Managers
- Computer Numerical Control Setup Operator
- Tool & Die Makers
- Computer Integrated Manufacturing

**Training**—Many secondary and post-secondary schools offer engineering related courses that can be applied not only to high school graduation but also to associate, baccalaureate and graduate degrees. Some certificates include specialties recognized by the Society of Manufacturing Engineers and the National Society of Professional Engineers.

**Average Annual Earnings—**  
**\$46,000–\$98,800\***

## Maintenance, Installation, & Repair

People in this field routinely maintain and repair machines, tools, equipment, and electrical systems. Computer-based inventory control systems are used both to retrieve maintenance histories and to record current repairs or maintenance.

### Types of Occupations

- Communication System Installers/Repairers
- Computer Repairers/Installers
- Instrument Control Technicians
- Job/Fixture Designers
- Laser Systems Technicians
- Meter Installers/Repairers
- Security System Installers/Repairers
- Maintenance Mechanic
- Maintenance Electrician

**Training**—Education includes courses in machine and tool repair, die, jig, and tool and die making, and courses in programmable logic controllers and other similar devices. While there are positions that can be entered from high school, post-secondary education and specialized training are typically required. There are also specific certifications in such areas as hydraulics, boilers, pneumatics and pump repair. Training in this field can include an associate's degree or a journeyman's card from a registered apprenticeship program.

**Average Annual Earnings—**  
**\$28,000–\$55,000\***

## Quality Assurance

Professionals in this field make certain standards and procedures are adhered to before, during, and after the manufacturing process. In addition, they test and inspect raw materials, the manufacturing process, and the finished product to ensure compliance to international quality standards.

### Types of Occupations

- Calibration Technicians
- Inspectors
- Lab Technicians
- Process Control Technicians
- Quality Control Technicians
- Quality Engineers
- SPC Coordinators

**Training**—For those who perform relatively simple testing, a high school diploma is generally sufficient. For more complex positions, both secondary and postsecondary schools offer a variety of courses and programs ranging from certification, to associate, baccalaureate and graduate degrees combined with work related experiences.

**Average Annual Earnings—**  
**\$19,000–\$70,000\***



## Logistics & Material Management

People in this field inventory both the raw materials used in production and the finished product. They transport materials to the production line, unload trucks, and prepare finished products for shipment.

### Types of Occupations

- Dispatchers
- Freight, Stock, and Material Movers
- Industrial Truck and Tractor Operators
- Logistics Engineers
- Logisticians
- Traffic Managers
- Production/Inventory Controllers

**Training**—While candidates sometimes start in entry-level positions without specialized skills, they will typically, along the way, need to pursue education and training beyond high school. Associate and bachelor of science degrees can be sought in business, marketing, logistics, and engineering and transportation. Certifications include Certified Professional Logistician (CPL) or Certified in Transportation and Logistics (CTL).

**Average Annual Earnings—  
\$18,000–\$60,000\***

## Health, Safety, & Environmental Assurance

People in this field make certain equipment is used safely. They plan and implement safety issues in new production processes and conduct investigations into environmental and safety issues. They also implement and monitor health and safety programs, policies, and procedures.

### Types of Occupations

- Environmental Engineers/Specialists
- Health and Safety Representatives
- Safety Engineers/Coordinators
- Safety Team Leaders
- Safety Technicians
- Health Physics Technicians

**Training**—Many technical colleges offer one- to two-year training programs. Four-year universities offer degrees in business, engineering and engineering technology. Most safety engineers and technicians, as well as environmental compliance inspectors, require special certification.

**Average Annual Earnings—  
\$32,000–\$60,000\***

## Resources



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GetTech  
[www.gettech.org](http://www.gettech.org)

Kuder Career Planning Systems  
[www.sc.kuder.com](http://www.sc.kuder.com)

Labor Licensing and Regulation  
[www.llr.state.sc.us](http://www.llr.state.sc.us)

Midlands Technical College  
[www.midlandstech.edu](http://www.midlandstech.edu)

Midlands Technical College—Continuing Education  
[www.mtctraining.com](http://www.mtctraining.com)

National Institute for Metalworking Skills  
[www.nims-skills.org](http://www.nims-skills.org)

Society of Manufacturing Engineers  
[www.sme.org](http://www.sme.org)

South Carolina Manufacturing Extension Partnership  
[www.scmep.org](http://www.scmep.org)

Women in Technology International  
[www.witi.com](http://www.witi.com)

WorkKeys  
[www.act.org/workkeys](http://www.act.org/workkeys)

*\*Career earnings will vary depending on training, job performance, experience and positions held. Educational pathways will also vary depending on your career ladder plan. Earnings may not include potential overtime or benefits.*

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