



Your Guide To Careers In

# Manufacturing



More than 892,000 Texans work in the manufacturing industry, which offers the highest compensation (more than \$63,000 a year per worker nationally) in the private sector.



## From Plan to Product, You Make It!

Texas ranks first as an exporter of manufactured products and second in factory production.



Texas manufacturing workers take home paychecks that are 22 percent higher than the national average.

# Programs of Study



## Production (i.e. Welder and Solderer)

People with careers in production work on the shop floor making parts or assembling them. The work with machines, making or assembling electronic parts, construction or assembling modular housing, performing welding jobs, or printing various materials.

## Manufacturing Production Process Development (i.e. Production Manager)

Employees in Manufacturing Production Process Development are responsible for product design and design of the manufacturing process.

## Maintenance, Installation and Repair (i.e. Industrial Technician)

People with careers in Maintenance, Installation and Repair perform preventive maintenance procedures on machines, tools and equipment.

## Quality Assurance (i.e. Quality Control Inspector)

Quality Assurance employees assure that standards and procedures are adhered to and that delivered products or services meet performance requirements.

## Logistics and Inventory (i.e. Materials Handler)

People with careers in Logistics and Inventory Control work with an inventory of raw materials and finished parts. They move raw materials to the production line, unload trucks with raw materials, wrap pallets of finished products for shipment, and communicate with traffic managers.

## Health, Safety and Environmental Assurance (i.e. Safety Coordinator)

Employees in Health, Safety and Environmental Assurance ensure that the equipment is being used safely in the workplace; plan for safety in new production processes.

# Career Options

Occupation	Education
Environmental Engineer	Bachelor's Plus Experience
Commercial and Industrial Designer	Bachelor's Plus Experience
General and Operations Manager	Bachelor's Plus Experience
Medical Equipment Repairer	Associate's Degree
Electromechanical Technician	Associate's Degree
Electrical and Electronic Engineering Technician	Associate's Degree
Mechanical Engineering Technician	Associate's Degree
Industrial Engineering Technician	Associate's Degree
Avionics Technician	Postsecondary Award
Electronic Home Entertainment Equipment Installer	Postsecondary Award
Electric Motor, Power Tool and Related Repairer	Postsecondary Award
Electronic Equipment Repairer, Motor Vehicle	Postsecondary Award
Purchasing Agent, except Wholesale, Retail, and Farm Product	Work Experience in a Related Occupation
First-Line Supervisor of Production and Operating Workers	Work Experience in a Related Occupation
Cabinetmaker and Bench Carpenter	Long-Term On-The-Job Training
Furniture Finisher	Long-Term On-The-Job Training
Numerical Tool and Process Control Programmer	Long-Term On-The-Job Training
Welder, Cutter, Solderer, and Brazier	Long-Term On-The-Job Training
Maintenance and Repair Worker, General	Moderate-Term On-The-Job Training
Manufactured Building and Mobile Home Installer	Moderate-Term On-The-Job Training
Crushing, Grinding, and Polishing Machine Tender	Moderate-Term On-The-Job Training
Painter, Transportation Equipment	Moderate-Term On-The-Job Training
Paper Goods Machine Tender	Moderate-Term On-The-Job Training
Packaging and Filling Machine Operator and Tender	Short-Term On-The-Job Training

# Sample Graduation Plan (26 Credit RHSP)

9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
English I	English II	English III	English IV
Algebra I	Geometry	Algebra II	4th Year of Math
Biology	Chemistry	Physics	4th Year of Science
World Geography	World History	US History	Government/Economics

The following courses must be included in the personal graduation plan at a time deemed appropriate by the student, parent, and counselor. Please refer to the Katy I.S.D. Planning Guide for additional information.

**Communication Applications (1/2 Credit)**

**Fine Arts (1 Credit)**

**P.E. (1 Credit)**

**Language Other Than English (2 Credits)**

**Health (1/2 Credit)**

**Electives (5 Credits - May Include CTE Elective Options\*)**

\*CTE Elective Options (Note: Course Selection and Sequence Based On Individual Student Interests, Abilities, and Course Availability) See below:

<b>Program of Study</b>	9 <sup>th</sup> Grade	10 <sup>th</sup> Grade	11 <sup>th</sup> Grade	12 <sup>th</sup> Grade
<b>Production</b>	<ul style="list-style-type: none"> <li>• Concepts of Engineering &amp; Technology</li> </ul> <p><i>Also available in 8th Grade</i></p>	<ul style="list-style-type: none"> <li>• Construction Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Principles Manufacturing (KHS)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Engineering Design</li> <li>• Agricultural Mechanics &amp; Metal Technologies</li> </ul>
<b>Manufacturing Production Process Development</b>	<ul style="list-style-type: none"> <li>• Concepts of Engineering &amp; Technology</li> </ul> <p><i>Also available in 8th Grade</i></p>	<ul style="list-style-type: none"> <li>• Construction Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Principles Manufacturing (KHS)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Engineering Design</li> <li>• Agricultural Mechanics &amp; Metal Technologies</li> </ul>
<b>Maintenance, Installation and Repair</b>	<ul style="list-style-type: none"> <li>• Concepts of Engineering &amp; Technology</li> </ul> <p><i>Also available in 8th Grade</i></p>	<ul style="list-style-type: none"> <li>• Construction Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Principles Manufacturing (KHS)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Engineering Design</li> <li>• Agricultural Mechanics &amp; Metal Technologies</li> </ul>
<b>Quality Assurance</b>	<ul style="list-style-type: none"> <li>• Concepts of Engineering &amp; Technology</li> </ul> <p><i>Also available in 8th Grade</i></p>	<ul style="list-style-type: none"> <li>• Construction Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Principles Manufacturing (KHS)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Engineering Design</li> <li>• Agricultural Mechanics &amp; Metal Technologies</li> </ul>
<b>Logistics and Inventory</b>	<ul style="list-style-type: none"> <li>• Concepts of Engineering &amp; Technology</li> </ul> <p><i>Also available in 8th Grade</i></p>	<ul style="list-style-type: none"> <li>• Construction Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Principles Manufacturing (KHS)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Engineering Design</li> <li>• Agricultural Mechanics &amp; Metal Technologies</li> </ul>
<b>Health, Safety and Environmental Assurance</b>	<ul style="list-style-type: none"> <li>• Concepts of Engineering &amp; Technology</li> </ul> <p><i>Also available in 8th Grade</i></p>	<ul style="list-style-type: none"> <li>• Construction Technology</li> </ul>	<ul style="list-style-type: none"> <li>• Principles Manufacturing (KHS)</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Engineering Design</li> <li>• Agricultural Mechanics &amp; Metal Technologies</li> </ul>



# Advanced Technical Credit Course Crosswalk

The following CTE courses that are offered in Katy I.S.D. may qualify as Advanced Technical Credit Courses (ATC).

Katy I.S.D. CTE Courses	Jr./Community College Equivalent
<b>Principles of Manufacturing (8043)</b>	Computer Integrated Manufacturing (INMT 1311 or INMT 1411)



## For More Information

The Career & Technical Education Department  
6301 South Stadium Lane  
Katy, Texas 77492  
281-396-2633

### Resources

*Achieve Texas in Action: A College and Career Planning Guide* - Texas Education Agency  
*Occupational Outlook Handbook* - U.S. Department of Labor

*It is the policy of Katy ISD not to discriminate on the basis of sex, disability, race, religion, color, gender, age, or national origin in its educational programs and/or activities including career and technical education programs, nor in its employment practices.*