

# Getting There

Junior College & Community College Programs	Aims Community College	Anapahoe Community College	Colorado Northwestern Community College	Community College of Aurora	Community College of Denver	Emily Griffith Technical College	Front Range Community College	Lamar Community College	Morgan Community College	Northwestern Junior College	Otero Junior College	Pikes Peak Community College	Pueblo Community College	Red Rocks Community College	Trinidad State Junior College
Applied Technology		A	A	A	A		A	A	A	A	A	A	A	A	A
Automotive Parts Management														A	
Business Administration		A, C	A	A	A		A, C	A, C	A	A	A	A, C		A, C	A
Construction Estimating		C													
Construction Site Management	A, C	A							C						
Construction Trades/Technology							A, C	A, C				A, C		A, C	A, C
Electronics Technology												A			
Engineering				A						A	A			A	A
Engineering/Applied Technologies		A, C		A			A, C						A, C	A	A, C
EPIC Heavy Equipment															A, C
Fabrication Welder				A, C											
Gunsmithing															A, C
Industrial Electronics Technology													A, C		
Industrial Engineering													A		
Industrial Maintenance Technology														A, C	
Machining Technologies				A, C									A, C		
Management	A, C		A	A, C	A		A, C	A, C	A, C	A, C	C	A, C	A, C		A, C
Manufacturing Technologies													A		A, C
Mechanical Engineering Technician											C				
Occupational Safety & Health															A, C
Physics			A	A		A			A	A	A			A	
Precision Machining														A, C	
Process Technology														A, C	
Telecommunications Technology		A, C													
Topics in Computer Science			C	A		A	C		A		A			A	
Topics in Office Support				A, C				C		A, C	A, C	A, C	A, C	A, C	A, C
Welding	A, C			A	C	A, C		A, C				A, C	A, C	A, C	A, C
Woodworking, General														A, C	

C = Certificate, A = Associate's Degree

Public University Programs	Adams State College	Colorado School of Mines	Colorado State University	Colorado State University - Pueblo	Fort Lewis College	Mesa State College	Metropolitan State College of Denver	University of Colorado at Boulder	University of Colorado at Colorado Springs	University of Colorado Denver	University of Northern Colorado	Western State College	Colorado Mountain College
Biochemical Engineering		B											
Business Administration	B, G, A		B, G, C	G	B	B, G, A, C	C	G	B, G, C	B, G	B	B	A
Chemical Engineering		B, G											
Chemical & Biological Engineering			B, G					B, G					
Chemical Physics								G					
Civil Engineering		B, G	B, G	B			B	B, G	B, G	B, G			
Computer Science	B	B, G	B, G		B	B, A	B	B, G	B, G	B, G		B	
Construction			B, G			B							
Electrical Engineering		B, G	B, G				B, C	B, G	B, G	B, G			
Engineering Physics		B					B						
Engineering			B, G		B					B, G			A
Industrial Engineering				B, G									
Management			B, G, C	B, G	B		B	B	B, C	B, G			
Mechanical Engineering		B, G	B, G			B	B	B, G	B, G	B, G			
Metallurgical & Materials Engineering		B, G											
Physics	B	B, G	B, G	B	B	B	B	B, G	B, G	B	B		A
Welding Technology						A, C							C

C = Certificate, A = Associate's Degree, B = Bachelor's Degree, G = Graduate Degree



# MANUFACTURING

**Manufacturing** includes hands-on and machine work. Jobs in the manufacturing industry give workers the opportunity to work as part of a team building a product. Manufacturing occupations encourage innovation and can provide variety in a day's work. If you want a career that provides problem solving opportunities with a variety of responsibilities, then manufacturing could be the right career for you!

## A Day In the Life of...

**Curt Castellanet**  
*Manufacturing Engineer*  
*Synthes, USA*  
*Monument, CO*

Curt performs a variety of daily duties both at his desk and on the production floor as a manufacturing engineer for Synthes, a leading global medical device company. He uses his computer to design tools and procedures and to review and create engineering drawings. His hands-on work on the production floor includes gathering data from production processes, helping to solve production problems, and troubleshooting and repairing machines.

Curt loves the diversity of his work as well as the challenge of being part of a team that solves difficult problems. "I like getting to talk with really smart people who have the same goals as I do for the projects we work on together," says Curt. "I enjoy making products that help people to heal from injuries."

Curt has a Bachelor of Science degree in Mechanical Engineering as well as a Master of Business Administration in Operations Management. He attributes the foundations of his career to the science, geometry, trigonometry, and statistics classes he took in high school. He credits English, business, foreign language, and arts education as supplementary to his career path. Curt's knowledge of the German language in particular aids him in his daily communication with German customers and suppliers of Synthes. "My advice for high school students is to take all of your coursework seriously and really dive deep into what you find interesting."

## Start Exploring Manufacturing Careers

### Step 1: Identify your interests

Compare your interests, skills and work values with manufacturing occupations using Labor Market Information's Career Explorer:

Visit [www.colmigateway.com](http://www.colmigateway.com)

- Click on "Services for Individuals"
- Choose "Career Explorer" under "Career Services"

From here, you can "Match Your Skills" and return to this page to "Match Your Work Interests and Work Values".

### Step 2: Explore the manufacturing industry & careers

Learn about high-growth, in-demand careers and what they pay on the LMI Gateway website:

[www.colmigateway.com](http://www.colmigateway.com)

For more information on a career in manufacturing, check out <http://www.camt.com/>

### Step 3: Find education, training & financial aid

Discover the best education or training institutions for your career goals and how to get money for school at <http://www.collegeincolorado.org>

### Step 4: Find available job openings

[www.connectingcolorado.com](http://www.connectingcolorado.com)

## A Day in the Life of...

### Chase Nichols

Team Assembler

CoorsTek

Golden, CO

Chase uses heavy equipment to make parts for protective gear such as transparent bullet resistant windows used by the military on its Humvees. He also makes the bullet-proof inserts that are used for police vests. Chase's favorite part about his job as a team assembler for CoorsTek is learning about the parts he makes and their use.

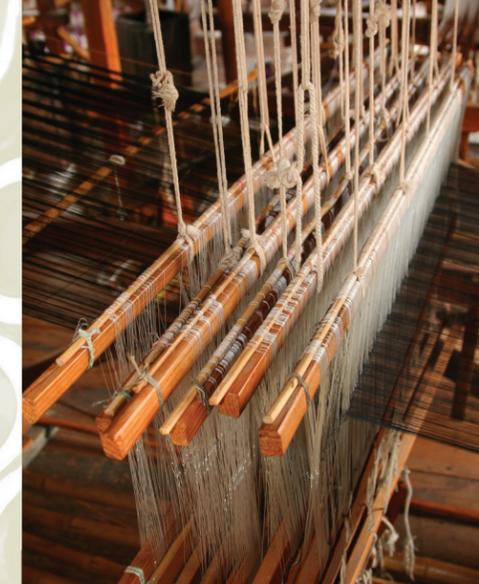
In high school, Chase most enjoyed his shop classes. After he graduated, he was able to apply what he learned to his job. "In those classes, we worked with a lot of the same tools as I do today," says Chase, "so I had some understanding of how things worked when I came into this job."

Chase begins his workday at five o'clock in the morning to prepare paper work and fire up his machine, a Lomis 120 ton extruder. After surveying the work order for the part, he extrudes, or shapes, the part according to its specifications. When he is finished, he places the part in the drying room and updates the order in the computer system. He continues this process until 2:15 p.m. when his workday ends.



# Who do you want to be tomorrow?

Occupation	Wage Range (Employment)	Minimum Education/Training	Suggested Programs of Study
<b>Industrial Production Managers</b> <i>Diagnose, adjust, repair, or overhaul aircraft engines and assemblies, such as hydraulic and pneumatic systems. Include helicopter and aircraft engine specialists.</i>	\$71,960 - \$122,814 (1,170)	Bachelor's Degree	Accounting, Economics, Finance, Financial Services, Planning & Financial Records
<b>Software Developers, Applications</b> <i>Develop &amp; modify computer applications software</i>	\$73,195 - \$115,207 (21,920)	Bachelor's Degree	Computer Science
<b>Mechanical Engineers</b> <i>Perform engineering duties in planning &amp; designing tools, engines &amp; machines</i>	\$63,989 - \$105,749 (5,320)	Bachelor's Degree Master's Degree	Engineering, Engineering Physics, Mechanical Engineering, Metallurgical & Materials Engineering, Physics
<b>Shipping, Receiving, &amp; Traffic Clerks</b> <i>Verify &amp; keep records on incoming and outgoing shipments</i>	24,067 - \$37,396 (9,520)	Short-term on-the-job training	High School Diploma
<b>Industrial Machinery Mechanics</b> <i>Repair, install, &amp; maintain production &amp; processing machinery</i>	\$39,270 - \$61,158 (5,160)	Long-term on-the-job training, Certificate	Industrial Electronics Technology, Industrial Engineering, Machine Technologies
<b>First-Line Supervisors of Production &amp; Operating Workers</b> <i>Supervise &amp; coordinate the activities of production &amp; operating workers</i>	\$46,323 - \$75,177 (5,790)	Work experience in related occupation, Certificate, Associates Degree	Management, Occupational Safety & Health
<b>Electrical &amp; Electronic Equipment Assemblers</b> <i>Assemble or modify electrical or electronic equipment</i>	\$23,468 - \$38,462 (3,430)	Short-term on-the-job training	High School Diploma
<b>Team Assemblers</b> <i>Work as part of a team having responsibility for assembling an entire product or component of a product</i>	\$20,614 - \$34,362 (5,930)	Moderate-term on-the-job training	High School Diploma
<b>Machinists</b> <i>Set up &amp; operate a variety of machine tools to produce precision parts &amp; instruments</i>	\$31,989 - \$53,031 (4,530)	Long-term on-the-job training, Certificate	Electronics Technology, Engineering / Applied Technologies, Machine Technologies, Precision Machining
<b>Welders, Cutters, Solderers, &amp; Brazers</b> <i>Use hand-welding or flame cutting equipment to weld or join metal components</i>	\$32,778 - \$47,761 (4,650)	Associates Degree, Certificate	Welding
<b>Inspectors, Testers, Sorters, Samplers &amp; Weighers</b> <i>Inspect, test, sort, sample, or weigh products for defects &amp; deviations from specifications</i>	\$28,318 - \$50,700 (4,430)	Moderate-term on-the-job training, Certificate	Industrial Maintenance Technology, Manufacturing Technology, Process Technology
<b>Packaging &amp; Filling Machine Operators &amp; Tendors</b> <i>Operate or tend machines to prepare industrial or consumer products for storage or shipment</i>	\$20,427 - \$41,237 (3,520)	Short-term on-the-job training	High School Diploma
<b>Helpers - Production Workers</b> <i>Help production workers perform their duties</i>	\$18,711 - \$31,644 (4,500)	Short-term on-the-job training	High School Diploma
<b>Heavy and Tractor-Trailer Truck Drivers</b> <i>Drive a tractor-trailer or a truck to transport &amp; deliver goods</i>	\$34,124 - \$51,015 (22,760)	Moderate-term on-the-job training	Commercial Drivers' License
<b>Laborers &amp; Freight, Stock, &amp; Material Movers, Hand</b> <i>Manually move freight, stock, or other materials</i>	\$20,311 - \$33,139 (26,340)	Short-term on-the-job training	High School Diploma



## Apprenticeship

Examples of apprenticeships offered for manufacturing occupations include:

- Electrician
- Construction Craft Laborer
- Truck Driver

## Did you know?

Manufacturing is green! An increasing number of manufacturing jobs are producing environmentally-friendly products. Some examples include wind turbines and power converters that emit clean energy.