



ACHIEVE TEXAS

ALIEF ISD COUNSELORS: PROMOTING COLLEGE AND CAREER READINESS

Careers in advanced manufacturing offer exciting opportunities in designing and improving products, operating high-tech tools and machinery, analyzing problems and coming up with creative solutions, and working with both your hands and your mind.

Sample Occupations:

- ◆ Engineer in design, industrial, aerospace, quality, logistical, safety or manufacturing
- ◆ Medical appliance manufacturer
- ◆ Microchip manufacturer
- ◆ Precision inspector, tester or grader
- ◆ Technician in automated manufacturing, laser, biomedical equipment, lab, quality control, safety coordination
- ◆ Inspector
- ◆ Machine operator
- ◆ Communication system, computer or meter installer or repairer
- ◆ Industrial truck and tractor operator

8 Career Pathways within the cluster:

1. Production
2. Manufacturing production process development
3. Maintenance
4. Installation and repair
5. Quality assurance
6. Logistics and inventory control
7. Health
8. Safety and environmental assurance

10 Fast-Growing Careers

Occupation	% Growth (2006-2016)	New Jobs (2006-2016)
Medical Equipment Repairers	33.0%	4,650
Environmental Science Technicians	28.0%	5,900
Welder	26.0%	65,750
Biological Technician	24.0%	3,100
Technical Writers	23.0%	4,250
Industrial Engineerings	22.0%	10,900
Maintenance and Repair Workers	20.0%	123,300
Avionics Technician	19.0%	2,800
Commercial and Industrial Design	18.0%	2,000
Numerical Tool and Process Control Programmer	14.0%	1,200

Source: Achieve Texas In Action Manufacturing Magazine





Top Paying Careers

Occupation	Average Wage	Entry Wage	Experienced Wage
Engineering Managers	\$63.26	\$42.64	\$73.57
Purchasing Managers	\$46.26	\$30.01	\$59.12
Sales Engineerings	\$42.41	\$27.82	\$53.94
Electrical Engineerings	\$42.81	\$29.35	\$52.23
Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products	\$32.51	\$18.64	\$43.87
Chemists	\$29.65	\$18.29	\$39.06
Electrical and Electronic Engineering Technician	\$26.22	\$17.43	\$30.65
Industrial Engineers	\$24.99	\$17.44	\$31.11
Mechanical Engineerings	\$24.22	\$16.83	\$29.04
Environmental Scientists	\$27.26	\$16.10	\$43.60

Source: Achieve Texas In Action Manufacturing Magazine

Manufacturing— Q and A

1. How does Texas rank in the Manufacturing field?
2. How many Texans work in the Manufacturing Industry?

Manufacturing Courses in Alief

- ◆ Principles of Manufacturing
- ◆ Welding
- ◆ Advanced Welding
- ◆ Career Preparation

MANUFACTURING CLUSTER

Answers: 1) Texas ranks first in exporting manufactured products and second in factory production
 2) More than 892,000 people work in the Manufacturing industry which offers the highest compensation (more than \$63,000 a year per worker nationally) in the private sector.



Required Knowledge and Skills

The nature of manufacturing has changed, and that has changed the way people prepare for manufacturing careers. If you like working with your hands, these careers may still be perfect for you. In manufacturing, students must master not just the how-tos of manufacturing, but the whys as well.

Learning the whys means mastering the basics—reading, writing, and arithmetic—that underlie the complexities of modern technology in production facilities.

To master modern technology, students have to have a strong background in math and computer skills.

Students can start work on these how-to skills, along with your academic skills, while you are still in high school. At many Texas high schools, students can earn professional skill certifications that can help them find immediate employment upon graduation.

The most common high school programs in manufacturing are machining and welding.

Source: Achieve Texas In Action Manufacturing Magazine (www.achievetexas.org).

For more information on courses in the Manufacturing cluster in Alief, go to the Achieve Texas Student Career Planner under Students tab on the Alief homepage (www.aliefisd.net).

Alief Manufacturing Students

