



MANUFACTURING



Academics

Program of Study: Robotics and Automation Technology

The **Robotics and Automation Technology** program of study focuses on occupational and educational opportunities associated with the assembly, operation, maintenance, and repair of electromechanical equipment or devices. This program of study includes exploration of a variety of mechanical fields, including robotics, refinery and pipeline systems, deep ocean exploration, and hazardous waste removal.

CAMPUSES

Energy Institute

INDUSTRY-BASED CERTIFICATIONS OFFERED

- NCCER Core
- Autodesk Associate (Certified User) Inventor for Mechanical Design

CAREER OCCUPATIONS

HIGH SCHOOL DEGREE

Computer Numerically Controlled Tool Operators

Median Salary: \$59,865
Annual Openings: 489

Machinists

Median Salary: \$59,865
Annual Openings: 2,098

ASSOCIATE'S DEGREE

Industrial Engineering Technologists and Technicians

Median Salary: \$122,076
Annual Openings: 1,996

Computer Numerically Controlled Tool Programmers

Median Salary: \$68,789
Annual Openings: 220

BACHELOR'S DEGREE

Industrial Engineers

Median Salary: \$122,076
Annual Openings: 1,996

OTHER OCCUPATIONS

DESCRIPTION

MEDIAN SALARY

ANNUAL OPENINGS

10-YEAR GROWTH

Mechanical Engineers

\$131,109

1,455

20.8%

To learn more about our CTE Programs please visit
<https://www.HoustonISD.org/CareerReadiness> or any of the campuses listed.

Cite Sources:

*Rice University Kinder Institute Workforce Demand Dashboard ([Click Here](#))

**"Employment Projections - Texas Wages and Employment Projections" ([Click Here](#))





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Academics

Program of Study: Welding

The **Welding** program of study focuses on the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. CTE learners will learn how to modify parts to make or repair machine tools or maintain individual machines and how to use hand-welding or flame-cutting equipment.

CAMPUSES

Barbara Jordan
Milby HS
Austin HS
Madison HS
Sterling HS
Wisdom HS

INDUSTRY-BASED CERTIFICATIONS OFFERED

- NCCER Welding Level I
- NCCER Core
- NCCER Construction Technology Certification Level I

CAREER OCCUPATIONS

HIGH SCHOOL DEGREE

Welders, Cutters, Solders and Brazors

Median Salary: \$62,496
Annual Openings: 2,556

ASSOCIATE'S DEGREE

Maintenance and Repair Workers, General

Median Salary: \$48,788
Annual Openings: 14,757

First-line supervisors of production and operating

Median Salary: \$69,430
Annual Openings: 1828

BACHELOR'S DEGREE

General and Operations Managers

Median Salary: \$121,665
Annual Openings: 320,800

Construction Managers

Median Salary: \$99,366
Annual Openings: 1,942

Materials Engineers

Median Salary: \$132,749
Annual Openings: 61

OTHER OCCUPATIONS

DESCRIPTION	MEDIAN SALARY	ANNUAL OPENINGS	10-YEAR GROWTH
Construction Laborers	\$41,802	16,750	14.7%
Industrial Production Managers	\$140,642	1,544	11.9%

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Program of Study: Manufacturing Technology

The **Manufacturing Technology** program of study focuses on occupational and educational opportunities associated with the development and use of automatic and computer-controlled machines, tools, and robots that perform work on metal or plastic. It includes exploration of a variety of machine tools that are used to produce precision parts and instruments. This program of study addresses how to modify parts to make or repair machine tools or maintain individual machines, and how to use hand-welding or flame-cutting equipment.

CAMPUSES

Austin HS

INDUSTRY-BASED CERTIFICATIONS OFFERED

- NCCER Core
- Certified Logistics Associate
- Certified Logistics Technician

CAREER OCCUPATIONS

HIGH SCHOOL DEGREE

Tool and Die Makers

Median Salary: \$57,869
Annual Openings: 620

Construction Laborers

Median Salary: \$41,802
Annual Openings: 16,750

ASSOCIATE'S DEGREE

Solar Thermal Installers and Technicians

Median Salary: \$47,619
Annual Openings: 921

BACHELOR'S DEGREE

Energy Engineers, Except Wind and Solar

Median Salary: \$154,787
Annual Openings: 10,100

GRADUATE

Architects, Except Landscape and Naval

Median Salary: \$94,670
Annual Openings: 650

OTHER OCCUPATIONS

DESCRIPTION	MEDIAN SALARY	ANNUAL OPENINGS	10-YEAR GROWTH
Project Management Specialists	\$105,532	9,003	19%
Industrial Engineering Technologists and Technicians	\$81,709	462	15.7%

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