



Industrial Machinery Mechanics

SOC Code 49-9041 • Projected Growth (2020) 5 %

Description

What Industrial Machinery Mechanics Do

Industrial machinery mechanics and maintenance workers maintain and repair factory equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment.

Duties

Industrial machinery mechanics typically do the following:

- Read technical manuals to understand equipment and controls
- Disassemble machinery and equipment when there is a problem
- Repair or replace broken or malfunctioning components
- Perform tests to make sure that the machine is running smoothly
- Adjust and calibrate equipment and machinery

Machinery maintenance workers typically do the following:

- Detect minor problems by performing basic diagnostic tests
- Clean and lubricate equipment or machinery
- Check the performance of machinery
- Test damaged machine parts to determine whether major repairs are needed
- Adjust equipment and reset or calibrate sensors and controls

Training Opportunities Linked to Those Jobs

(Degree Types and Colleges/Universities)

How to Become a Machinery Mechanic

Both industrial machinery mechanics and machinery maintenance workers typically need a high school diploma. However, industrial machinery mechanics need a year or more of training after high school, whereas machinery maintenance workers typically receive on-the-job training that takes a few months to a year.

Education and Training

Employers of industrial machinery mechanics and maintenance workers generally require them to have earned at least a high school diploma or a General Educational Development (GED) certificate. However, employers increasingly prefer to hire workers with some training in industrial technology. Employers also prefer to hire workers who have taken high school or postsecondary courses in mechanical drawing, mathematics, blueprint reading, computer programming, or electronics.

Industrial machinery mechanics usually need a year or more of formal education and training after high school to learn the necessary mechanical and technical skills. Although mechanics used to specialize in one area, such as hydraulics or electronics, many factories now require every mechanic to understand electricity, electronics, hydraulics, and computer programming.

Some mechanics complete a 2-year associate's degree program in industrial maintenance. Others may start as helpers or in other factory jobs and learn the skills of the trade informally or by taking courses offered through their employer.

Employers may offer onsite technical training or send workers to local technical schools while they also receive on-the-job training. Classroom instruction focuses on subjects such as shop mathematics, blueprint reading, welding, electronics, and computer training. In addition to technical instruction, mechanics train on the specific machines that they will repair. They can get this training on the job, through dealers' or manufacturers' representatives, or in a classroom.

Machinery maintenance workers typically receive on-the-job training that lasts a few months to a year. They learn how to perform routine tasks, such as setting up, cleaning, lubricating, and starting machinery. This training may be offered by experienced workers, professional trainers, or representatives of equipment manufacturers.

Important Qualities

Manual dexterity. Workers must have a steady hand and good hand–eye coordination when handling very small parts.

Mechanical skills. Industrial machinery and maintenance workers must be able to reassemble large, complex machines back together after finishing a repair.

Problem-solving skills. Workers must be able to inspect damaged parts of large machinery and figure out why the machinery is not working.

Technical skills. Industrial machinery mechanics and maintenance workers use sophisticated diagnostic equipment to figure out why machines are not working.

Troubleshooting skills. Industrial machinery and maintenance workers must observe and properly diagnose and fix problems that a machine may be having

Postsecondary Education

Texas Southmost College	South Texas College	Texas State Technical College	The University of Texas at Brownsville	The University of Texas - Pan American
		Industrial Systems Technology (CERT)		

Local Employers

Burton Fluid Power	Brownsville		Hino Electric Power CO	Harlingen
Dixie Tool	Brownsville		Applied Petroleum Technologies	Harlingen
Gulf Systems Inc	Brownsville		Asphalt Products Inc	Harlingen
Industrial Technology Supplies	Brownsville		Burton Bearing & Ind Inc	Harlingen
Materiales Triple AAA Inc	Brownsville		Rio Grande Equipment CO	Harlingen

Career Options

(Specific Job Types)

- Maintenance Mechanic
- Engineering Technician
- Machine Adjuster
- Industrial Mechanic
- Maintenance Technician
- Master Mechanic
- Overhauler
- Mechanic
- Industrial Machinery Mechanic
- Industrial Electrician

Salary Ranges

Wages for **Industrial Machinery Mechanics**

Location	Pay Period	2012				
		10%	25%	Median	75%	90%
United States	Hourly	\$14.83	\$18.14	\$22.56	\$28.03	\$34.04
	Yearly	\$30,800	\$37,700	\$46,900	\$58,300	\$70,800
Texas	Hourly	\$13.50	\$16.97	\$21.87	\$28.47	\$34.47
	Yearly	\$28,100	\$35,300	\$45,500	\$59,200	\$71,700

Location	Pay Period	2012				
		10%	25%	Median	75%	90%
Brownsville-Harlingen, TX MSA	Hourly	\$8.93	\$10.78	\$15.22	\$20.02	\$32.32
	Yearly	\$18,600	\$22,400	\$31,700	\$41,600	\$67,200

Professional Associations linked to the Careers

For information about industrial machinery mechanics and maintenance workers, visit

[The International Maintenance Institute](#)

[Society for Maintenance and Reliability Professionals](#)

[The Association for Maintenance Professionals](#)

[APICS, The Association for Operations Management](#)

[National Association of Manufacturers](#)

For further information on apprenticeship programs, write to the Apprenticeship Council of your state's labor department or to local firms that employ machinery mechanics and repairers. You can also find information about registered apprenticeships, together with links to state apprenticeship programs, on the U.S. Department of Labor website: [Employment and Training Administration](#). Apprenticeship information is available as well from the U.S. Department of Labor toll-free help line: (877) 872-5627.

Sources

The information provided in this document was collected from the following sources:

- Occupational Outlook Handbook (<http://www.bls.gov/ooh/>)
- O*NET OnLine (<http://www.onetonline.org/>)
- Texas CARES (<http://www.texascaresonline.com/>)
- CareerOneStop (<http://www.careeronestop.org/>)



Course Overview: Planning, managing, and performing the processing of materials into intermediate or final products and related professional and technical support activities.

Industrial Machinery Mechanics

Career Goal (O*NET Code): (49-9041) - Industrial machinery mechanics and maintenance workers maintain and repair factory equipment and other industrial machinery, such as conveying systems, production machinery, and packaging equipment.

Student Name: _____

Grade: _____

School: _____

SUGGESTED COURSEWORK

EXTENDED LEARNING EXPERIENCES

Middle School	8th	HS Courses:	(Local districts may list high school credit courses here)	Curricular Experiences: BEST Robotics, Inc FIRST High School Robotics Competition SkillsUSA Technology Student Association TSTC Summer Technology Camps UTB Summer Robotics Camp Career Learning Experiences: Apprenticeship Career Preparation Internship Job Shadowing	Extracurricular Experiences: National Engineering Design Competition School Newspaper Student Government UIL Academic Competitions Yearbook Service Learning Experiences: Campus Service Organizations Community Service Volunteer Habitat for Humanity Peer Mentoring / Peer Tutoring	
High School	9th	Core Courses:	English I Algebra I or Geometry Biology			World Geography Languages other than English I Physical Education
		Career-Related Electives:	Principles of Manufacturing			
	10th	Core Courses:	English II Geometry or Algebra II Chemistry			World History Languages other than English II
		Career-Related Electives:	Precision Metal Manufacturing or Welding			
	11th	Core Courses:	English III Algebra II or Pre-Calculus Physics/Principles of Technology I			United States History Professional Communications Languages other than English III
		Career-Related Electives:	Advanced Precision Metal Manufacturing or Advanced Welding			
12th	Core Courses:	English IV Precalculus/Engineering Mathematics/Calculus Engineering Design and Problem Solving	Government/Economics Fine Arts	COLLEGE CREDIT OPPORTUNITIES -- High School Students should take Advanced Placement (AP), International Baccalaureate (IB), dual credit, Advanced Technical Credit (ATC), or locally articulated credit courses, if possible. List those courses that count for college credit on your campus.		
	Career-Related Electives:	Practicum in Manufacturing or Problems and Solutions or Career Preparation I				

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Career Options:

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[The International Maintenance Institute](#)
[Society for Maintenance and Reliability Professionals](#)
[The Association for Maintenance Professionals](#)
[APICS, The Association for Operations Management](#)
[National Association of Manufacturers](#)

Postsecondary		Texas Southmost College	South Texas College	Texas State Technical College	<ul style="list-style-type: none"> • Maintenance Mechanic • Engineering Technician • Machine Adjuster • Industrial Mechanic • Industrial Machinery Mechanic • Maintenance Technician • Master Mechanic • Overhauler • Mechanic • Industrial Electrician 	
			Industrial Systems Technology (CERT)			
		University of Texas at Brownsville	University of Texas - Pan American			

Students may select other elective courses for personal enrichment purposes.

This plan of study serves as a guide, along with other career planning materials, for pursuing a career path and is based on the most recent information as of 2012. All plans meet high school graduation requirements as well as college entrance requirements.