LOUISIANA WORKFORCE COMMISSION
The Department of Labor

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Machinists

Louisiana

Summary of Job Duties

Machinists Video - Set up and operate a variety of machine tools to produce precision parts and instruments. Includes precision instrument makers who fabricate, modify, or repair mechanical instruments. May also fabricate and modify parts to make or repair machine tools or maintain industrial machines, applying knowledge of mechanics, mathematics, metal properties, layout, and machining procedures.

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Detailed Job Description

Machinists Machinists typically use blueprints, sketches, or computer-aided design (CAD) and computer-aided manufacturing (CAM) files.

Machinists and tool and die makers set up and operate a variety of computer-controlled and mechanically controlled machine tools to produce precision metal parts, instruments, and tools.

Duties

Machinists typically do the following:

• Read blueprints, sketches, or computer-aided design (CAD) and computer-aided manufacturing (CAM) files
• Set up, operate, and disassemble manual, automatic, and computer numerically controlled (CNC) machine tools
• Align, secure, and adjust cutting tools and workpieces
• Monitor the feed and speed of machines
• Turn, mill, drill, shape, and grind machine parts to specifications
• Measure, examine, and test completed products for defects
• Smooth the surfaces of parts or products
• Present finished workpieces to customers and make modifications if needed

Tool and die makers typically do the following:

• Read blueprints, sketches, specifications, or CAD and CAM files for making tools and dies
• Compute and verify dimensions, sizes, shapes, and tolerances of workpieces
• Set up, operate, and disassemble conventional, manual, and CNC machine tools
• File, grind, and adjust parts so that they fit together properly
• Test completed tools and dies to ensure that they meet specifications
• Smooth and polish the surfaces of tools and dies

Machinists use machine tools, such as lathes, milling machines, and grinders, to produce precision metal parts. Many machinists must be able to use both manual and CNC machinery. CNC machines control the cutting tool speed and do all necessary cuts to create a part. The machinist determines the cutting path, the speed of the cut, and the feed rate by programming instructions into the CNC machine.

Although workers may produce large quantities of one part, precision machinists often produce small batches or one-of-a-kind items. The parts that machinists make range from simple steel bolts to titanium bone screws for orthopedic implants. Hydraulic parts, antilock brakes, and automobile pistons are other widely known products that machinists make.

Some machinists repair or make new parts for existing machinery. After an industrial machinery mechanic discovers a broken part in a machine, a machinist remanufactures the part. The machinist refers to blueprints and performs the same machining operations that were used to create the original part in order to create the replacement.

Some manufacturing processes use lasers, water jets, and electrified wires to cut the workpiece. As engineers design and build new types of machine tools, machinists must learn new machining properties and techniques.

Tool and die makers construct precision tools or metal forms, called dies, that are used to cut, shape, and form metal and other materials. They produce jigs and fixtures—devices that hold metal while it is bored, stamped, or drilled—and gauges and other measuring devices.

Dies are used to shape metal in stamping and forging operations. They also make metal molds for die casting and for molding plastics, ceramics, and composite materials.

Tool and die makers use CAD to develop products and parts. They enter designs into computer programs that produce blueprints for the required tools and dies. Computer numeric control programmers, described in the metal and plastic machine workers profile, convert CAD designs into CAM programs that contain instructions for a sequence of cutting-tool operations. Once these programs are developed, CNC machines follow the set of instructions contained in the program to produce the part. Machinists normally operate CNC machines, but tool and die makers often are trained to both operate CNC machines and write CNC programs and thus may do either task.

Source: U.S. Department of Labor Bureau of Labor Statistics

Job Zone

The section below shows the job zone information for Machinists. Job Zone Three: Medium Preparation Needed.

Education	Experience	Training

Education	Experience	Training
Most occupations in this zone require training in vocational schools, related on-the-job experience, or an associate's degree.	Previous work-related skill, knowledge, or experience is required for these occupations. For example, an electrician must have completed three or four years of apprenticeship or several years of vocational training, and often must have passed a licensing exam, in order to perform the job.	Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Jobs Available

This section shows the number of job openings advertised online in Louisiana for Machinists and for the related occupational group of Production Occupations on November 24, 2020 (Jobs De-duplication Level 2).

Occupation	Job Openings
Machinists	41
Production Occupations	1,002

Source: Online advertised jobs data

Monthly Job Count

This section shows the number of job openings advertised online for Machinists in Louisiana October, 2020 (Jobs De-duplication Level 2).

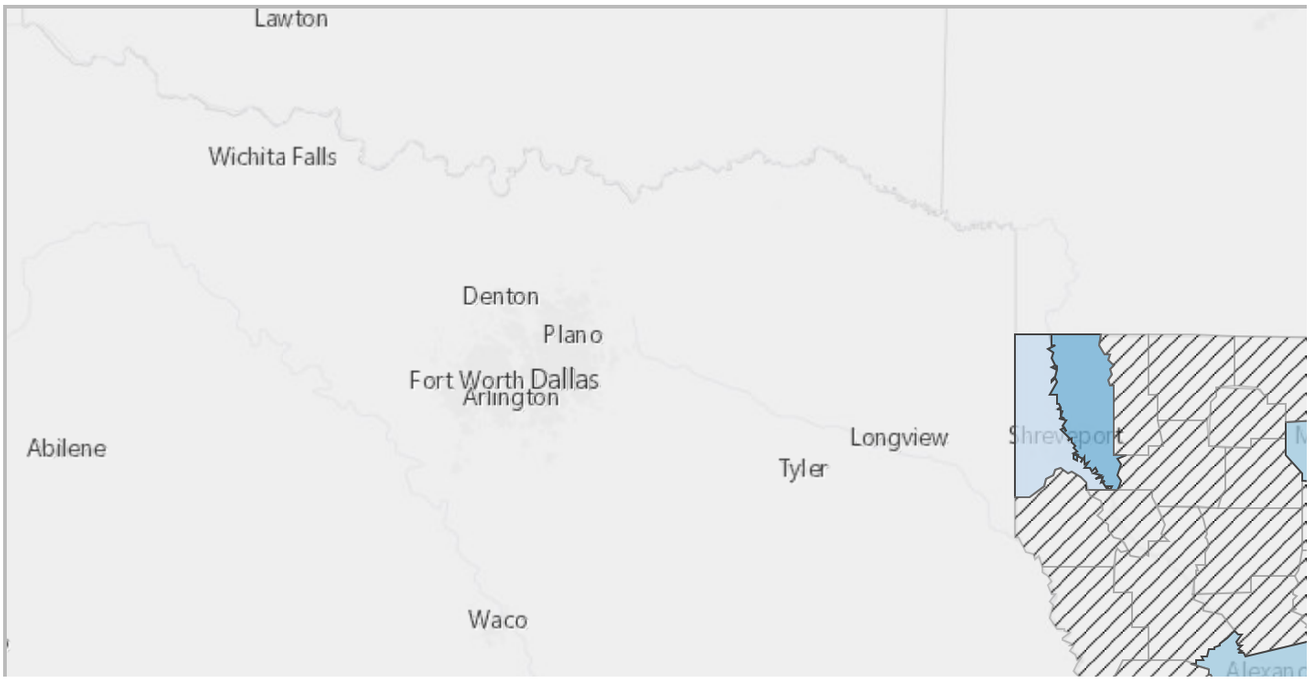
Occupation	Job Openings
Machinists	94

GREEN OCCUPATIONS

Source: Online advertised jobs data

Jobs Area Distribution

This section shows the distribution of number of job openings advertised online for Machinists in Louisiana by parishes on November 24, 2020 (Jobs De-duplication Level 2).



Job Source: Online advertised jobs data
Wage Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

Jobs in Related Occupations

This section shows the number of job openings advertised online in Louisiana for occupations related to Machinists on November 24, 2020 (Jobs De-duplication Level 2).

Rank	Occupation	Median Wage	Job Openings	*Related By
1	Machinists	$48,160	41	N/A
2	Electrical and Electronics Repairers, Commercial and Industrial Equipment	$62,553	18	O*NET
3	Industrial Machinery Mechanics	$55,230	16	O*NET
4	Rough Carpenters	$45,602	9	O*NET
5	Computer-Controlled Machine Tool Operators, Metal and Plastic	N/A	6	O*NET
6	Mechanical Engineering Technicians	$75,598	5	O*NET
7	Brickmasons and Blockmasons	$43,828	5	O*NET
8	Cabinetmakers and Bench Carpenters	$28,260	5	O*NET
9	Earth Drillers, Except Oil and Gas	N/A	4	O*NET
10	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	$25,514	4	SOC4
11	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	N/A	4	O*NET

Rank	Occupation	Median Wage	Job Openings	*Related By
12	Foundry Mold and Coremakers	N/A	3	SOC4
13	Electric Motor, Power Tool, and Related Repairers	$43,551	2	O*NET
14	Mixing and Blending Machine Setters, Operators, and Tenders	$45,229	2	O*NET
15	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	$75,618	2	O*NET
16	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$42,806	1	O*NET
17	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	1	O*NET
18	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$33,935	1	SOC4
19	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	$29,955	1	O*NET

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Job Source: Online advertised jobs data
Wage Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.
*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Candidates Available

This section shows potential candidates in the workforce system in Louisiana for Machinists and for the related occupational group of Production Occupations on November 24, 2020.

Occupation	Candidates
Machinists	513
Production Occupations	20,567

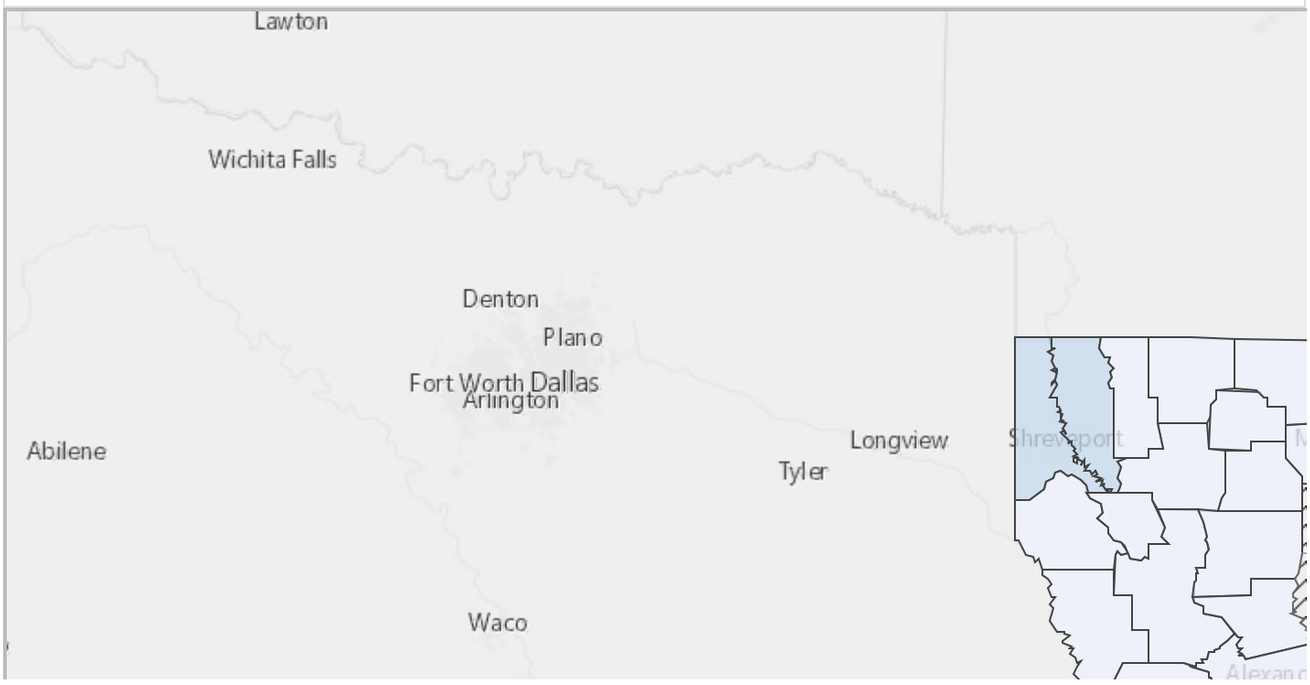
Source: Individuals with active résumés in the workforce system.

Candidate Area Distribution

This section shows the distribution of potential candidates in the workforce system for Machinists in Louisiana by parishes on November 24, 2020.

Rank	Area Name	Median Wage	Candidates
1	Lafayette Parish	$48,160 state level wages	257
2	Iberia Parish	$48,160 state level wages	216

Rank	Area Name	Median Wage	Candidates
3	St. Martin Parish	$48,160 state level wages	212
4	Vermilion Parish	$48,160 state level wages	193
5	Acadia Parish	$48,160 state level wages	180
6	St. Landry Parish	$48,160 state level wages	168
7	Jefferson Parish	$48,160 state level wages	158
8	Terrebonne Parish	$48,160 state level wages	156
9	Lafourche Parish	$48,160 state level wages	149
10	Orleans Parish	$48,160 state level wages	149



Candidate Source: Individuals with active résumés in the workforce system.
Wage Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

Candidates in Related Occupations

This section shows how many potential candidates in the workforce system were looking for work in Louisiana in occupations related to Machinists on November 24, 2020.

Rank	Occupation	Median Wage	Candidates	*Related By
1	Electrical and Electronics Repairers, Commercial and Industrial Equipment	$62,553	556	O*NET
2	Machinists	$48,160	513	N/A
3	Rough Carpenters	$45,602	317	O*NET
4	Industrial Machinery Mechanics	$55,230	278	O*NET
5	Brickmasons and Blockmasons	$43,828	143	O*NET
6	Cabinetmakers and Bench Carpenters	$28,260	135	O*NET
7	Computer-Controlled Machine Tool Operators, Metal and Plastic	N/A	116	O*NET
8	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	$40,118	94	SOC4
9	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	N/A	89	O*NET
10	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$40,086	82	O*NET
11	Printing Press Operators	$30,411	73	O*NET
12	Electric Motor, Power Tool, and Related Repairers	$43,551	72	O*NET
13	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	$46,031	69	O*NET
14	Earth Drillers, Except Oil and Gas	N/A	52	O*NET
15	Mechanical Engineering Technicians	$75,598	51	O*NET
16	Mixing and Blending Machine Setters, Operators, and Tenders	$45,229	47	O*NET
17	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$37,611	41	O*NET
18	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	N/A	39	O*NET
19	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	$29,955	39	O*NET
20	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$33,935	37	SOC4
21	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	$75,618	30	O*NET
22	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$42,806	25	O*NET

Rank	Occupation	Median Wage	Candidates	*Related By
23	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	22	O*NET
24	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	$25,514	19	SOC4
25	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	$33,639	14	SOC4
26	Glass Blowers, Molders, Benders, and Finishers	$27,396	13	O*NET
27	Model Makers, Metal and Plastic	N/A	8	O*NET
28	Metal-Refining Furnace Operators and Tenders	$46,827	7	O*NET
29	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	6	SOC4
30	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	$42,990	6	SOC4
31	Cooling and Freezing Equipment Operators and Tenders	$20,930	5	O*NET
32	Model Makers, Wood	N/A	4	O*NET
33	Foundry Mold and Coremakers	N/A	3	SOC4
34	Tool and Die Makers	$43,334	2	O*NET
35	Nuclear Equipment Operation Technicians	N/A	1	O*NET

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

Candidate Source: Individuals with active résumés in the workforce system.
Wage Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.
*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Jobs and Candidates Available

This section shows the number of job openings advertised online, as well as potential candidates in the workforce system in Louisiana for Machinists and for the related occupational group of Production Occupations on November 24, 2020 (Jobs De-duplication Level 2).

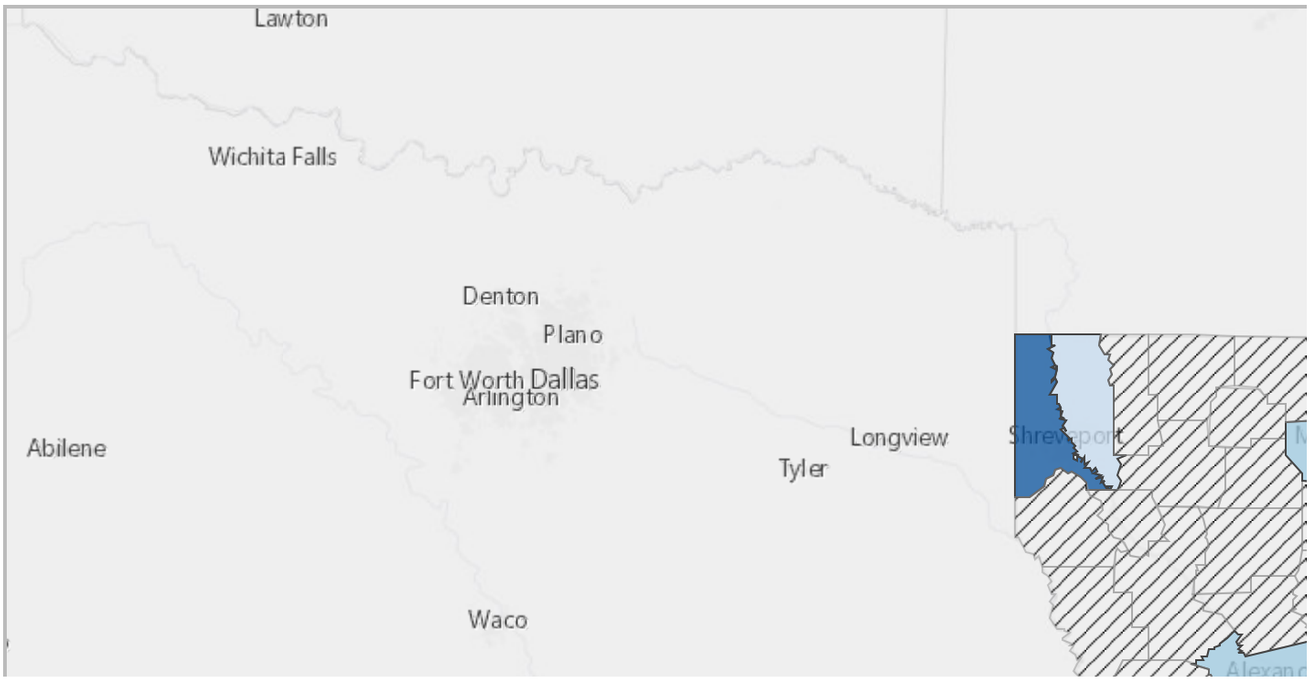
Occupation	Job Openings	Candidates	Candidates per Job
Machinists	41	513	12.51
Production Occupations	1,002	20,567	20.53

Job Source: Online advertised jobs data
Candidate Source: Individuals with active résumés in the workforce system.

Jobs and Candidates Area Distribution

This section shows the distribution of number of job openings advertised online, as well as potential candidates in the workforce system for Machinists in Louisiana by parishes on November 24, 2020 (Jobs De-duplication Level 2).

Rank	Area Name	Median Wage	Job Openings	Candidates	Candidates per Job
1	Caddo Parish	$48,160 state level wages	1	130	130.00
2	Lafayette Parish	$48,160 state level wages	2	257	128.50
3	Cameron Parish	$48,160 state level wages	1	120	120.00
4	St. James Parish	$48,160 state level wages	1	119	119.00
5	Jefferson Parish	$48,160 state level wages	2	158	79.00
6	Plaquemines Parish	$48,160 state level wages	2	128	64.00
7	Ascension Parish	$48,160 state level wages	2	126	63.00
8	Iberville Parish	$48,160 state level wages	2	121	60.50
9	Rapides Parish	$48,160 state level wages	2	121	60.50
10	Ouachita Parish	$48,160 state level wages	2	119	59.50



Job Source: Online advertised jobs data
Candidate Source: Individuals with active résumés in the workforce system.
Wage Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Data is from a 2019 survey.

National Supply and Demand Summary

Machinists Overall employment of machinists and tool and die makers is projected to show little or no change from 2016 to 2026. Employment growth will vary by specialty.

Employment of machinists is projected to grow 2 percent from 2016 to 2026, slower than the average for all occupations. With improvements in technologies, such as computer numerically controlled (CNC) machine tools, autoloaders, high-speed machining, and lights-out manufacturing, machinists will still be required to set up, monitor, and maintain these systems.

Employment of tool and die makers is projected to decline 7 percent from 2016 to 2026. Advances in automation, including CNC machine tools, should reduce demand for tool and die makers to perform tasks, such as programming how parts fit together, that computer software can perform.

Job Prospects

Job prospects for machinists and tool and die makers are expected to be good, primarily because of the number of job openings arising each year from the need to replace workers who retire or leave the occupation.

Source: U.S. Department of Labor Bureau of Labor Statistics

Employers by Number of Job Openings

This section shows the employers with the highest number of job openings advertised online for Machinists in Louisiana on November 24, 2020 (Jobs De-duplication Level 2).

Rank	Employer Name	Job Openings

Rank	Employer Name	Job Openings
1	Energy Transfer Partners, L.P.	3
2	Team, Inc.	3
3	Army National Guard	2
4	Brandenburg Industrial Service Company	2
5	COCA-COLA BOTTLING COMPANY UNITED INC	2
6	EMCOR Group, Inc.	2
7	nVent Management Company	2
8	PAE Aviation and Technical Services LLC	2
9	Petroleum Service Group, LLC	2
10	Westaff	2

Source: Online advertised jobs data

Advertised Job Skills

This section shows the top advertised detailed job skills found in job openings advertised online for Machinists in Louisiana in October, 2020. (Jobs De-duplication Level 1)

Rank	Advertised Detailed Job Skill	Advertised Skill Group	Job Opening Match Count
1	Welding	Welding Skills	14
2	Preventative maintenance	Maintenance Technician Skills	9
3	Must be flexible	Basic Skills	6
4	Divide in all units of measure	Mathematical Skills	5
5	Ability to compute	Mathematical Skills	5
6	Draw and interpret bar graphs	Mathematical Skills	5
7	Be a team player	Interpersonal Skills	5
8	Machining operations	Computer Numerical Control (CNC) Machinist Skills	5
9	Customer service	Customer Service Skills	4
10	Inventory control	Bill and Account Collectors Skills	4

Source: Online advertised jobs data

Advertised Tools and Technology

This section shows the top advertised detailed tools and technologies found in job openings advertised online for Machinists in Louisiana in October, 2020. (Jobs De-duplication Level 1)

Rank	Advertised Detailed Tool or Technology	Advertised Tool and Technology Group	Job Opening Match Count
1	Ladders	Ladders	23
2	Grinders	Grinding or Polishing Machines	18
3	Milling machines	Milling Machines	16

Rank	Advertised Detailed Tool or Technology	Advertised Tool and Technology Group	Job Opening Match Count
4	Personal protective equipment	Hazardous Material Protective Apparel	13
5	Calipers	Calipers	10
6	Saws	Saws	9
7	Rotating equipment	Rotating Shakers	8
8	Drill presses	Drill Press or Radial Drills	8
9	Engine lathes	Horizontal Turning Centers	7
10	Gauges	Height Gauges	7

Source: Online advertised jobs data

Typical Job Skills

This section shows the job skills that are related to Machinists.

Rank	Typical Job Skills	Typical Skill Category
1	Measure dimensions of completed products or workpieces to verify conformance to specifications	Information Input
2	Calculate dimensions of workpieces, products, or equipment	Information Input
3	Operate cutting equipment	Work Output
4	Operate grinding equipment	Work Output
5	Operate metal or plastic forming equipment	Work Output
6	Program equipment to perform production tasks	Work Output
7	Review blueprints or other instructions to determine operational methods or sequences	Information Input
8	Monitor equipment operation to ensure proper functioning	Information Input
9	Maintain production or processing equipment	Work Output
10	Determine metal or plastic production methods	Mental Processes
11	Prepare fabrics or materials for processing or production	Work Output
12	Assemble machine tools, parts, or fixtures	Work Output
13	Mount attachments or tools onto production equipment	Work Output
14	Conduct test runs of production equipment	Information Input
15	Exchange information with colleagues	Interacting With Others
16	Advise others on ways to improve processes or products	Interacting With Others
17	Install mechanical components in production equipment	Work Output
18	Diagnose equipment malfunctions	Mental Processes
19	Design tools, fixtures, or other devices for production equipment	Mental Processes

Rank	Typical Job Skills	Typical Skill Category
20	Disassemble equipment for maintenance or repair	Work Output
21	Replace worn equipment components	Work Output
22	Dispose of trash or waste materials	Work Output
23	Draw guide lines or markings on materials or workpieces using patterns or other references	Work Output
24	Measure materials to mark reference points, cutting lines, or other indicators	Information Input
25	Sort recyclable materials	Mental Processes
26	Test materials, solutions, or samples	Information Input
27	Operate welding equipment	Work Output
28	Monitor lubrication of equipment or workpieces	Information Input
29	Create diagrams or blueprints for workpieces or products	Mental Processes
30	Plan production or operational procedures or sequences	Mental Processes
31	Assemble electromechanical or hydraulic systems	Work Output

Personal Skills

This section shows the personal skills that are most useful for Machinists. Click on a link in the Personal Skills column to view more detailed information.

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Operation and Control	Controlling operations of equipment or systems.	56
Operation Monitoring	Watching gauges, dials, or other indicators to make sure a machine is working properly.	53
Monitoring	Monitoring/Assessing performance of yourself, other individuals, or organizations to make improvements or take corrective action.	53
Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.	53
Speaking	Talking to others to convey information effectively.	50
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.	50
Coordination	Adjusting actions in relation to others' actions.	50

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Complex Problem Solving	Identifying complex problems and reviewing related information to develop and evaluate options and implement solutions.	50
Quality Control Analysis	Conducting tests and inspections of products, services, or processes to evaluate quality or performance.	50
Troubleshooting	Determining causes of operating errors and deciding what to do about it.	50
Equipment Maintenance	Performing routine maintenance on equipment and determining when and what kind of maintenance is needed.	47
Repairing	Repairing machines or systems using the needed tools.	47
Time Management	Managing one's own time and the time of others.	47
Social Perceptiveness	Being aware of others' reactions and understanding why they react as they do.	47
Reading Comprehension	Understanding written sentences and paragraphs in work related documents.	47
Mathematics	Using mathematics to solve problems.	47
Active Learning	Understanding the implications of new information for both current and future problem-solving and decision-making.	44
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.	44
Equipment Selection	Determining the kind of tools and equipment needed to do a job.	41
Installation	Installing equipment, machines, wiring, or programs to meet specifications.	38
Systems Evaluation	Identifying measures or indicators of system performance and the actions needed to improve or correct performance, relative to the goals of the system.	38
Systems Analysis	Determining how a system should work and how changes in conditions, operations, and the environment will affect outcomes.	38
Instructing	Teaching others how to do something.	38
Writing	Communicating effectively in writing as appropriate for the needs of the audience.	38
Negotiation	Bringing others together and trying to reconcile differences.	35
Persuasion	Persuading others to change their minds or behavior.	31
Service Orientation	Actively looking for ways to help people.	31

Personal Skill	Skill Description	Rank by Importance (Out of 100)
Learning Strategies	Selecting and using training/instructional methods and procedures appropriate for the situation when learning or teaching new things.	28
Operations Analysis	Analyzing needs and product requirements to create a design.	25
Management of Personnel Resources	Motivating, developing, and directing people as they work, identifying the best people for the job.	25
Technology Design	Generating or adapting equipment and technology to serve user needs.	22
Programming	Writing computer programs for various purposes.	19
Management of Material Resources	Obtaining and seeing to the appropriate use of equipment, facilities, and materials needed to do certain work.	19
Management of Financial Resources	Determining how money will be spent to get the work done, and accounting for these expenditures.	16
Science	Using scientific rules and methods to solve problems.	13

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Typical Education Requirements

Machinists Machinists usually require at least a High school diploma or equivalent. However, not all employers may make this a hiring requirement.

Source: This information is based on the BLS Occupational Outlook Handbook (OOH).

Required Level of Education

This section shows the results of a national survey listing the most common required level of education for Machinists.

Rank	Required Level of Education	Percentage of Respondents
1	High School Diploma - or the equivalent (for example, GED)	35.91%
2	Post-Secondary Certificate - awarded for training completed after high school (for example, in agriculture or natural resources, computer services, personal or culinary services, engineering technologies, healthcare, construction trades, mechanic and repair technologies, or precision production)	33.12%
3	Some College Courses	17.34%
4	Less than a High School Diploma	13.63%

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

On The Job Training

This section shows the results of a national survey listing the most common lengths of on the job training for Machinists.

Rank	On The Job Training	Percentage of Respondents
1	Over 3 months, up to and including 6 months	34.20%
2	Anything beyond short demonstration, up to and including 1 month	31.25%
3	Over 1 year, up to and including 2 years	13.40%
4	Over 4 years, up to and including 10 years	7.38%
5	Over 1 month, up to and including 3 months	5.11%
6	Over 2 years, up to and including 4 years	3.20%
7	Over 6 months, up to and including 1 year	2.88%
8	None or short demonstration	2.58%

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

On-Site or In-Plant Training

This section shows the results of a national survey listing the most common lengths of on-site or in-plant training for Machinists.

Rank	On-Site or In-Plant Training	Percentage of Respondents
1	Over 1 year, up to and including 2 years	22.37%
2	Up to and including 1 month	22.08%
3	Over 3 months, up to and including 6 months	16.86%
4	None	9.96%
5	Over 1 month, up to and including 3 months	9.48%
6	Over 6 months, up to and including 1 year	8.67%
7	Over 4 years, up to and including 10 years	7.38%
8	Over 2 years, up to and including 4 years	3.20%

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Education Level of Jobs and Candidates

This section shows the minimum level of education requested by employers on job openings advertised online, as well as the educational attainment of potential candidates in the workforce system that are looking for jobs as Machinists in Louisiana on November 24, 2020. There were 9 job openings advertised online that did not specify a minimum education requirement (Jobs De-duplication Level 2).

Rank	Education Level	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
1	No Minimum Education Requirement	21	51.22%	0	N/A
2	Less than High School	0	N/A	32	6.24%
3	High School Diploma or Equivalent	11	26.83%	226	44.05%

Rank	Education Level	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
4	1 Year of College or a Technical or Vocational School	0	N/A	61	11.89%
5	2 Years of College or a Technical or Vocational School	0	N/A	61	11.89%
6	3 Years of College or a Technical or Vocational School	0	N/A	19	3.70%
7	Vocational School Certificate	0	N/A	60	11.70%
8	Associate's Degree	0	N/A	36	7.02%
9	Bachelor's Degree	0	N/A	17	3.31%
10	Master's Degree	0	N/A	1	0.19%
11	Not Specified	9	21.95%	0	N/A

Job Source: Online advertised jobs data
Candidate Source: Individuals with active résumés in the workforce system.

Education Training Programs

This section shows the Education Training Programs for Machinists in Louisiana.

Provider Name	Program Name	Location	Tuition	Length	WIOA Eligible
Delgado Community College	Skilled Craft Training-Industrial Maintenance An industry-recognized certificate or certification	New Orleans, LA	$3,148	13 Weeks	✓
Delgado Community College	Skilled Craft Training-Industrial Maintenance An industry-recognized certificate or certification	Metairie, LA	$3,148	13 Weeks	✓
Delgado Community College	Skilled Craft Training-Industrial Maintenance An industry-recognized certificate or certification	New Orleans, LA	$3,148	13 Weeks	✓
Delgado Community College	Skilled Craft Training-Industrial Maintenance An industry-recognized certificate or certification	Avondale, LA	$3,148	13 Weeks	✓

Provider Name	Program Name	Location	Tuition	Length	WIOA Eligible
Fletcher Technical Community College	CNC Operator-Machinist An industry-recognized certificate or certification, A community college certificate of completion, A measurable skills gain leading to a credential, A measurable skills gain leading to employment	Schriever, LA	$3,000	6 Weeks	✓
Fletcher Technical Community College	Machine Tool Shop Hand Technical Competency Area (TCA) Employment, A measurable skills gain leading to a credential, A measurable skills gain leading to employment	Houma, LA	$2,060	6 Weeks	✓
Fletcher Technical Community College	Machine Tool Technology Diploma Employment, A measurable skills gain leading to a credential, A measurable skills gain leading to employment	Schriever, LA	$6,782	4 Semesters	✓
Northshore Technical Community College	Machine Tool Technology A measurable skills gain leading to a credential	Hammond, LA	$8,206	4 Semesters	✓
Northshore Technical Community College	Machine Tool Technology A measurable skills gain leading to a credential	Bogalusa, LA	$8,206	4 Semesters	✓
QualiCal Academy	Machinist Apprenticeship A certificate of completion of an apprenticeship	Houma, LA	$4,975	288 Hours	

Source: U.S. Department of Commerce, Bureau of the Census, Midyear Estimates

Advertised Job Certifications

This section shows the top advertised certification groups found in job openings advertised online for Machinists in Louisiana in October, 2020. (Jobs De-duplication Level 1)

Rank	Advertised Certification Group	Advertised Certification Sub-Category	Job Opening Match Count
1	Commercial Drivers License (CDL)	Ground Transportation	5
2	The Back School Certifications	Medical Treatment and Therapy	4
3	NACE General Corrosion Program Certifications	Safety and Quality	3
4	Cisco Associate Certifications	Computer Network	1
5	Association of Certified College Funding Specialists (ACCFS)	Financial Specialists	1

Source: Online advertised jobs data

Training Program Completers

There is no data available for Machinists in Louisiana.

National Education, Training, Licensing and Qualifications

Machinists Education

Machinists typically have a high school diploma or equivalent, whereas tool and die makers may need to complete courses beyond high school. High school courses in math, blueprint reading, metalworking, and drafting are considered useful.

Some community colleges and technical schools have 2-year programs that train students to become machinists or tool and die makers. These programs usually teach design and blueprint reading, the use of a variety of welding and cutting tools, and the programming and function of computer numerically controlled (CNC) machines.

Training

There are multiple ways for workers to gain competency in the job as a machinist or tool or die maker. One common way is through long-term on-the-job training, which lasts 1 year or longer.

Trainees usually work 40 hours per week and take additional technical instruction during evenings. Trainees often begin as machine operators and gradually take on more difficult assignments. Machinists and tool and die makers must be experienced in using computers to work with CAD/CAM technology, CNC machine tools, and computerized measuring machines. Some machinists become tool and die makers.

Some new workers may enter apprenticeship programs, which are typically sponsored by a manufacturer. Apprenticeship programs often consist of paid shop training and related technical instruction lasting several years. The technical instruction usually is provided in cooperation with local community colleges and vocational–technical schools. Workers typically enter into apprenticeships with a high school diploma or equivalent.

Licenses, Certifications, and Registrations

A number of organizations and colleges offer certification programs. The Skills Certification System, for example, is an industry-driven program that aims to align education pathways with career pathways. In addition, journey-level certification is available from state apprenticeship boards after the completion of an apprenticeship.

Completing a certification program provides machinists and tool and die makers with better job opportunities and helps employers judge the abilities of new hires.

Important Qualities

Analytical skills. Machinists and tool and die makers must understand technical blueprints, models, and specifications so that they can craft precision tools and metal parts.

Manual dexterity. Machinists' and tool and die makers' work must be accurate. For example, machining parts may demand accuracy to within .0001 of an inch, a level of accuracy that requires workers' concentration and dexterity.

Math skills and computer application experience. Workers must be experienced in using computers to work with CAD/CAM technology, CNC machine tools, and computerized measuring machines.

Mechanical skills. Machinists and tool and die makers must operate milling machines, lathes, grinders, laser and water cutting machines, wire electrical discharge machines, and other machine tools.

Physical stamina. Machinist and tool and die makers must stand for extended periods and perform repetitious movements.

Technical skills. Machinists and tool and die makers must understand computerized measuring machines and metalworking processes, such as stock removal, chip control, and heat treating and plating.

Source: U.S. Department of Labor Bureau of Labor Statistics

Typical Work Experience Requirements

Machinists Employees in these occupations usually need one or two years of training involving both on-the-job experience and informal training with experienced workers. A recognized apprenticeship program may be associated with these occupations.

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Related Work Experience

This section shows the results of a national survey listing the most common related work experience for Machinists.

Rank	Related Work Experience	Percentage of Respondents
1	Over 2 years, up to and including 4 years	20.22%
2	None	19.67%
3	Over 1 year, up to and including 2 years	16.36%
4	Over 4 years, up to and including 6 years	14.64%
5	Over 3 months, up to and including 6 months	9.84%
6	Over 10 years	7.47%
7	Over 6 months, up to and including 1 year	4.80%
8	Over 1 month, up to and including 3 months	3.87%
9	Over 8 years, up to and including 10 years	3.13%

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Work Experience of Jobs and Candidates

This section shows the minimum required work experience requested by employers on job openings advertised online, as well as the experience level of potential candidates in the workforce system that are looking for jobs as Machinists in Louisiana on November 24, 2020. There were 9 job openings advertised online that did not specify a minimum experience requirement (Jobs De-duplication Level 2).

Rank	Experience	Job Openings	Percentage of Job Openings	Potential Candidates	Percentage of Potential Candidates
1	Not Specified	9	21.95%	0	N/A
2	Entry Level	16	39.02%	0	N/A
3	Less than 1 year	0	N/A	18	3.51%
4	1 Year to 2 Years	5	12.20%	8	1.56%
5	2 Years to 5 Years	11	26.83%	36	7.02%
6	5 Years to 10 Years	0	N/A	47	9.16%
7	More than 10 Years	0	N/A	404	78.75%

Job Source: Online advertised jobs data
Candidate Source: Individuals with active résumés in the workforce system.

Current Job Order Wage Information

The employer has NOT indicated a salary range for this job. The information below shows statistics on typical salaries in the local labor market for Machinists. This data is NOT an indication of what this employer is willing to pay for this job.

Employment Wage Statistics

This section shows the estimated employment wage statistics for individuals in Louisiana employed for Machinists in 2019.

Rate Type / Statistical Type	Entry level	Median	Experienced
Annual wage or salary	$32,154	$48,160	$68,690
Hourly wage	$15.46	$23.15	$33.02

Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Entry level and Experienced wage rates represent the means of the lower 1/3 and upper 2/3 of the wage distribution, respectively. Data is from an annual survey.

Wage Rates on Advertised Jobs

This section shows a statistical breakdown of available wage data on the 41 job openings advertised online for Machinists in Louisiana that posted a salary on November 24, 2020.

Rate Type / Statistical Type	Entry Level	Median	Experienced
Annual wage or salary	$34,002	$43,680	$48,970
Hourly Wage	$16.35	$21.00	$23.54

Source: Online advertised jobs data
Note: This information is based on actual job orders and is not based on a statistically valid labor

market survey. Hourly wage rate calculations in this section assume a 40 hour work week.

Desired Salary of Available Candidates

This section shows the desired salary of potential candidates in the workforce system that are looking for jobs as Machinists in Louisiana on November 24, 2020.

Rank	Desired Salary	Potential Candidates	Percentage of Potential Candidates
1	Not Specified	104	20.19%
2	$5,000 - $19,999	4	0.78%
3	$20,000 - $34,999	143	27.77%
4	$35,000 - $49,999	157	30.49%
5	$50,000 - $64,999	85	16.51%
6	$65,000 - $79,999	15	2.91%
7	$80,000 - $94,999	7	1.36%

Source: Individuals with active résumés in the workforce system.

Wage Rates Area Distribution

There is no data available for Machinists in Louisiana.

Wage Rates in Related Occupations

This section shows a comparison of 2019 median annual rates for occupations that are in the same occupational family as Machinists for Louisiana.

Rank	Occupation	Median	*Related By
1	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	$75,618	O*NET
2	Mechanical Engineering Technicians	$75,598	O*NET
3	Electrical and Electronics Repairers, Commercial and Industrial Equipment	$62,553	O*NET
4	Industrial Machinery Mechanics	$55,230	O*NET
5	Machinists	$48,160	N/A
6	Metal-Refining Furnace Operators and Tenders	$46,827	O*NET
7	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	$46,031	O*NET
8	Rough Carpenters	$45,602	O*NET
9	Mixing and Blending Machine Setters, Operators, and Tenders	$45,229	O*NET
10	Brickmasons and Blockmasons	$43,828	O*NET
11	Electric Motor, Power Tool, and Related Repairers	$43,551	O*NET
12	Tool and Die Makers	$43,334	O*NET
13	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	$42,990	SOC4

Rank	Occupation	Median	*Related By
14	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$42,806	O*NET
15	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	$40,118	SOC4
16	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$40,086	O*NET
17	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$37,611	O*NET
18	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	$33,935	SOC4
19	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	$33,639	SOC4
20	Printing Press Operators	$30,411	O*NET
21	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	$29,955	O*NET
22	Cabinetmakers and Bench Carpenters	$28,260	O*NET
23	Glass Blowers, Molders, Benders, and Finishers	$27,396	O*NET
24	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	$25,514	SOC4
25	Cooling and Freezing Equipment Operators and Tenders	$20,930	O*NET
26	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	O*NET

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Source: Labor Market Statistics, Occupational Employment Statistics Program
The median wage is the estimated 50th percentile; 50 percent of workers in an occupation earn less than the median wage, and 50 percent earn more than the median wage. Entry level and Experienced wage rates represent the means of the lower 1/3 and upper 2/3 of the wage distribution, respectively. Data is from an annual survey.
*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Wage Rates by Industry

There is no data available for Machinists in Louisiana.

National Earnings Data Summary

Machinists The median annual wage for tool and die makers was $51,060 in May 2016. The lowest 10 percent earned less than $31,790, and the highest 10 percent earned more than $74,230.

In May 2016, the median annual wages for machinists in the top industries in which they worked were as follows:

Transportation equipment manufacturing $45,640
Machinery manufacturing 42,660
Machine shops 40,410
Merchant wholesalers, durable goods 39,550

Employment services 34,140

In May 2016, the median annual wages for tool and die makers in the top industries in which they worked were as follows:

Aerospace product and parts manufacturing $64,180
Motor vehicle parts manufacturing 57,080
Forging and stamping 50,530
Machine shops; turned product; and screw, nut, and bolt manufacturing 48,890
Metalworking machinery manufacturing 47,480

The pay of apprentices is tied to their skill level. As they reach specific levels of performance and experience, their pay increases.

Although many machinists and tool and die makers work full time during regular business hours, some work evenings and weekends because facilities may operate around the clock. About 1 in 4 worked more than 40 hours a week in 2016.

Source: U.S. Department of Labor Bureau of Labor Statistics

Occupational Employment & Future Employment Outlook

This section shows the long term employment projections for Machinists in Louisiana from 2016-2026.

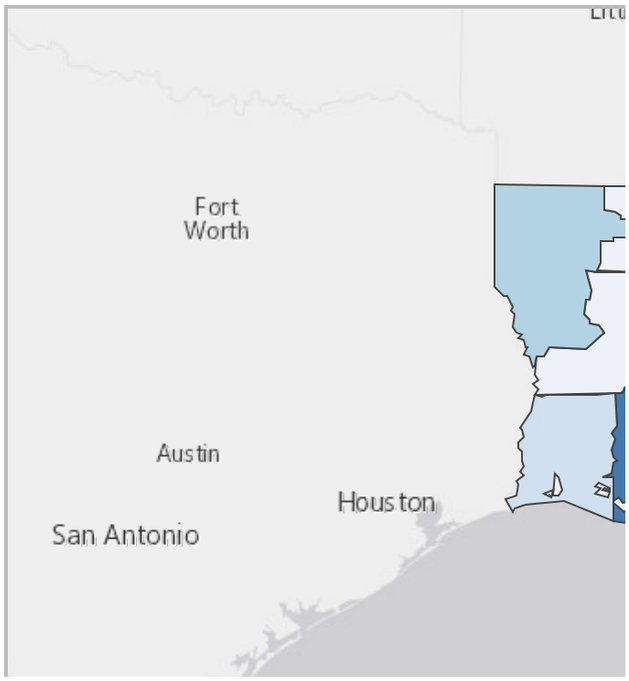
Occupation	2016 Estimated Employment	2026 Projected Employment	Total 2016-2026 Employment Change	2016-2026 Annual Avg. Percent Change
Machinists	4,876	5,450	574	1.12%
Total All	2,034,986	2,203,144	168,158	0.80%

Source: Occupational Employment Projections

Employment Data Area Distribution

This section shows the distribution of the estimated employment for Machinists in Louisiana by regional labor market area.

Rank	Area	2016 Estimated Employment
1	4th Regional Labor Market Area, Lafayette	1,485
2	2nd Regional Labor Market Area, Baton Rouge	1,101
3	1st Regional Labor Market Area, New Orleans	836
4	7th Regional Labor Market Area, Shreveport	473
5	3rd Regional Labor Market Area, Houma	429
6	5th Regional Labor Market Area, Lake Charles	243
7	6th Regional Labor Market Area, Alexandria	129
8	8th Regional Labor Market Area, Monroe	123



Source: Labor Market Statistics, Occupational Employment Projections Program

Employment Data in Related Occupations

This section shows the 2016 Estimated Employment in Louisiana for occupations related to Machinists.

Rank	Occupation	2016 Estimated Employment	*Related By
1	Rough Carpenters	18,228	O*NET
2	Industrial Machinery Mechanics	7,260	O*NET
3	Machinists	4,876	SOC4
4	Mixing and Blending Machine Setters, Operators, and Tenders	1,656	O*NET
5	Printing Press Operators	1,537	O*NET
6	Electrical and Electronics Repairers, Commercial and Industrial Equipment	913	O*NET
7	Computer-Controlled Machine Tool Operators, Metal and Plastic	756	O*NET
8	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	705	O*NET
9	Brickmasons and Blockmasons	674	O*NET
10	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	670	SOC4
11	Cabinetmakers and Bench Carpenters	517	O*NET
12	Earth Drillers, Except Oil and Gas	498	O*NET

Rank	Occupation	2016 Estimated Employment	*Related By
13	Mechanical Engineering Technicians	444	O*NET
14	Electric Motor, Power Tool, and Related Repairers	402	O*NET
15	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	373	SOC4
16	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	365	SOC4
17	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	316	O*NET
18	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	303	O*NET
19	Nuclear Equipment Operation Technicians	296	O*NET
20	Tool and Die Makers	259	O*NET
21	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	240	SOC4
22	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	194	SOC4
23	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	193	O*NET
24	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	192	O*NET
25	Glass Blowers, Molders, Benders, and Finishers	188	O*NET
26	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	178	O*NET
27	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	163	O*NET
28	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	63	O*NET
29	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	51	O*NET
*	Cooling and Freezing Equipment Operators and Tenders	Confidential	O*NET
*	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	Confidential	SOC4
*	Foundry Mold and Coremakers	Confidential	SOC4
*	Metal-Refining Furnace Operators and Tenders	Confidential	O*NET
*	Model Makers, Metal and Plastic	Confidential	O*NET
*	Patternmakers, Metal and Plastic	Confidential	O*NET
*	Pourers and Casters, Metal	Confidential	SOC4

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* Rank is suppressed for confidential data.

Source: Occupational Employment Projections

*Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.

SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Projected Annual Openings

This section shows the long term projected annual openings for Machinists in Louisiana from 2016 to 2026.

Occupation	Total Annual Average Openings	Annual Average Openings Due to Growth	Annual Average Openings Due to Replacement
Machinists	N/A	N/A	N/A
Production	N/A	N/A	N/A

Source: Labor Market Statistics, Occupational Employment Projections Program

Projected Annual Openings Area Distribution

This section shows the distribution of the total annual average openings for Machinists in Louisiana by regional labor market area from 2016 to 2026.

Rank	Area	Total Annual Average Openings
1	1st Regional Labor Market Area, New Orleans	N/A
2	2nd Regional Labor Market Area, Baton Rouge	N/A
3	3rd Regional Labor Market Area, Houma	N/A
4	4th Regional Labor Market Area, Lafayette	N/A
5	5th Regional Labor Market Area, Lake Charles	N/A
6	6th Regional Labor Market Area, Alexandria	N/A
7	7th Regional Labor Market Area, Shreveport	N/A
8	8th Regional Labor Market Area, Monroe	N/A

There is no total annual average openings data available for Machinists in Louisiana.

Source: Labor Market Statistics, Occupational Employment Projections Program

Projected Annual Openings in Related Occupations

This section shows the projected total annual average openings in Louisiana for occupations related to Machinists from 2016 to 2026.

Rank	Occupation	Total Annual Average Openings	*Related By

Rank	Occupation	Total Annual Average Openings	*Related By
1	Brickmasons and Blockmasons	N/A	O*NET
2	Cabinetmakers and Bench Carpenters	N/A	O*NET
3	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	N/A	O*NET
4	Computer-Controlled Machine Tool Operators, Metal and Plastic	N/A	O*NET
5	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	SOC4
6	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	N/A	O*NET
7	Earth Drillers, Except Oil and Gas	N/A	O*NET
8	Electric Motor, Power Tool, and Related Repairers	N/A	O*NET
9	Electrical and Electronics Repairers, Commercial and Industrial Equipment	N/A	O*NET
10	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	SOC4
11	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	N/A	O*NET
12	Glass Blowers, Molders, Benders, and Finishers	N/A	O*NET
13	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	N/A	O*NET
14	Industrial Machinery Mechanics	N/A	O*NET
15	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	N/A	O*NET
16	Machinists	N/A	SOC4
17	Mechanical Engineering Technicians	N/A	O*NET
18	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	O*NET
19	Mixing and Blending Machine Setters, Operators, and Tenders	N/A	O*NET
20	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	SOC4
21	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	N/A	SOC4
22	Nuclear Equipment Operation Technicians	N/A	O*NET
23	Printing Press Operators	N/A	O*NET
24	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	N/A	SOC4
25	Rough Carpenters	N/A	O*NET
26	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	N/A	O*NET
27	Tool and Die Makers	N/A	O*NET
28	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	N/A	O*NET

Rank	Occupation	Total Annual Average Openings	*Related By
29	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	N/A	O*NET
*	Cooling and Freezing Equipment Operators and Tenders	Confidential	O*NET
*	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	Confidential	SOC4
*	Foundry Mold and Coremakers	Confidential	SOC4
*	Metal-Refining Furnace Operators and Tenders	Confidential	O*NET
*	Model Makers, Metal and Plastic	Confidential	O*NET
*	Patternmakers, Metal and Plastic	Confidential	O*NET
*	Pourers and Casters, Metal	Confidential	SOC4

BRIGHT OUTLOOK NATIONALLY | GREEN OCCUPATIONS

* Rank is suppressed for confidential data.

Source: Occupational Employment Projections

Industries by Employment

This section shows the industries that employed the highest number of Machinists in Louisiana in 2016.

Rank	Industry Title	Estimated Employment	Percent of Total Employment
1	Fabricated Metal Product Manufacturing	1,897	38.90%
2	Machinery Manufacturing	1,046	21.45%
3	Repair and Maintenance	334	6.85%
4	Rental and Leasing Services	201	4.12%
5	Transportation Equipment Manufacturing	193	3.96%
6	Petroleum and Coal Products Manufacturing	157	3.22%
7	Chemical Manufacturing	98	2.01%
8	Administrative and Support Services	83	1.70%
9	Self-Employed and Unpaid Family Workers, Primary Job	80	1.64%
10	Computer and Electronic Product Manufacturing	76	1.56%

Source: Louisiana Workforce Commission, Occupational Projections Program

Work Activities

This section shows the most common work activities required by Machinists in order of importance. Click on a link in the Work Activity column to view more detailed information.

Work Activity	Work Activity Description	Rank by Importance (Out of 100)

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Controlling Machines and Processes	Using either control mechanisms or direct physical activity to operate machines or processes (not including computers or vehicles).	92
Getting Information	Observing, receiving, and otherwise obtaining information from all relevant sources.	83
Inspecting Equipment, Structures, or Material	Inspecting equipment, structures, or materials to identify the cause of errors or other problems or defects.	81
Monitor Processes, Materials, or Surroundings	Monitoring and reviewing information from materials, events, or the environment, to detect or assess problems.	72
Identifying Objects, Actions, and Events	Identifying information by categorizing, estimating, recognizing differences or similarities, and detecting changes in circumstances or events.	72
Repairing and Maintaining Mechanical Equipment	Servicing, repairing, adjusting, and testing machines, devices, moving parts, and equipment that operate primarily on the basis of mechanical (not electronic) principles.	69
Making Decisions and Solving Problems	Analyzing information and evaluating results to choose the best solution and solve problems.	67
Communicating with Supervisors, Peers, or Subordinates	Providing information to supervisors, co-workers, and subordinates by telephone, in written form, e-mail, or in person.	67
Handling and Moving Objects	Using hands and arms in handling, installing, positioning, and moving materials, and manipulating things.	66
Training and Teaching Others	Identifying the educational needs of others, developing formal educational or training programs or classes, and teaching or instructing others.	63
Processing Information	Compiling, coding, categorizing, calculating, tabulating, auditing, or verifying information or data.	63
Organizing, Planning, and Prioritizing Work	Developing specific goals and plans to prioritize, organize, and accomplish your work.	60
Updating and Using Relevant Knowledge	Keeping up-to-date technically and applying new knowledge to your job.	60
Interacting With Computers	Using computers and computer systems (including hardware and software) to program, write software, set up functions, enter data, or process information.	59

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Drafting, Laying Out, and Specifying Technical Devices, Parts, and Equipment	Providing documentation, detailed instructions, drawings, or specifications to tell others about how devices, parts, equipment, or structures are to be fabricated, constructed, assembled, modified, maintained, or used.	59
Evaluating Information to Determine Compliance with Standards	Using relevant information and individual judgment to determine whether events or processes comply with laws, regulations, or standards.	57
Judging the Qualities of Things, Services, or People	Assessing the value, importance, or quality of things or people.	57
Performing General Physical Activities	Performing physical activities that require considerable use of your arms and legs and moving your whole body, such as climbing, lifting, balancing, walking, stooping, and handling of materials.	56
Documenting/Recording Information	Entering, transcribing, recording, storing, or maintaining information in written or electronic/magnetic form.	53
Establishing and Maintaining Interpersonal Relationships	Developing constructive and cooperative working relationships with others, and maintaining them over time.	50
Coordinating the Work and Activities of Others	Getting members of a group to work together to accomplish tasks.	49
Analyzing Data or Information	Identifying the underlying principles, reasons, or facts of information by breaking down information or data into separate parts.	48
Thinking Creatively	Developing, designing, or creating new applications, ideas, relationships, systems, or products, including artistic contributions.	48
Estimating the Quantifiable Characteristics of Products, Events, or Information	Estimating sizes, distances, and quantities; or determining time, costs, resources, or materials needed to perform a work activity.	47
Scheduling Work and Activities	Scheduling events, programs, and activities, as well as the work of others.	47
Operating Vehicles, Mechanized Devices, or Equipment	Running, maneuvering, navigating, or driving vehicles or mechanized equipment, such as forklifts, passenger vehicles, aircraft, or water craft.	45
Coaching and Developing Others	Identifying the developmental needs of others and coaching, mentoring, or otherwise helping others to improve their knowledge or skills.	44

Work Activity	Work Activity Description	Rank by Importance (Out of 100)
Interpreting the Meaning of Information for Others	Translating or explaining what information means and how it can be used.	42
Developing and Building Teams	Encouraging and building mutual trust, respect, and cooperation among team members.	42
Resolving Conflicts and Negotiating with Others	Handling complaints, settling disputes, and resolving grievances and conflicts, or otherwise negotiating with others.	42
Monitoring and Controlling Resources	Monitoring and controlling resources and overseeing the spending of money.	41
Provide Consultation and Advice to Others	Providing guidance and expert advice to management or other groups on technical, systems-, or process-related topics.	40
Developing Objectives and Strategies	Establishing long-range objectives and specifying the strategies and actions to achieve them.	38
Guiding, Directing, and Motivating Subordinates	Providing guidance and direction to subordinates, including setting performance standards and monitoring performance.	36
Repairing and Maintaining Electronic Equipment	Servicing, repairing, calibrating, regulating, fine-tuning, or testing machines, devices, and equipment that operate primarily on the basis of electrical or electronic (not mechanical) principles.	32
Assisting and Caring for Others	Providing personal assistance, medical attention, emotional support, or other personal care to others such as coworkers, customers, or patients.	26
Selling or Influencing Others	Convincing others to buy merchandise/goods or to otherwise change their minds or actions.	26
Communicating with Persons Outside Organization	Communicating with people outside the organization, representing the organization to customers, the public, government, and other external sources. This information can be exchanged in person, in writing, or by telephone or e-mail.	24
Performing Administrative Activities	Performing day-to-day administrative tasks such as maintaining information files and processing paperwork.	23
Staffing Organizational Units	Recruiting, interviewing, selecting, hiring, and promoting employees in an organization.	20

Tasks

This section shows the most common tasks required by Machinists in order of importance. Click on a link in the Task column to view more detailed information.

Tasks	Task Description	Rank by Importance (Out of 100)
Calculate dimensions or tolerances, using instruments, such as micrometers or vernier calipers.	Core	95
Machine parts to specifications, using machine tools, such as lathes, milling machines, shapers, or grinders.	Core	94
Measure, examine, or test completed units to check for defects and ensure conformance to specifications, using precision instruments, such as micrometers.	Core	91
Set up, adjust, or operate basic or specialized machine tools used to perform precision machining operations.	Core	89
Program computers or electronic instruments, such as numerically controlled machine tools.	Core	89
Study sample parts, blueprints, drawings, or engineering information to determine methods or sequences of operations needed to fabricate products.	Core	87
Monitor the feed and speed of machines during the machining process.	Core	87
Maintain machine tools in proper operational condition.	Core	86
Fit and assemble parts to make or repair machine tools.	Core	85
Align and secure holding fixtures, cutting tools, attachments, accessories, or materials onto machines.	Core	84
Operate equipment to verify operational efficiency.	Core	83
Confer with numerical control programmers to check and ensure that new programs or machinery will function properly and that output will meet specifications.	Core	83
Evaluate machining procedures and recommend changes or modifications for improved efficiency or adaptability.	Core	82
Diagnose machine tool malfunctions to determine need for adjustments or repairs.	Core	77
Design fixtures, tooling, or experimental parts to meet special engineering needs.	Core	77
Dispose of scrap or waste material in accordance with company policies and environmental regulations.	Core	76
Lay out, measure, and mark metal stock to display placement of cuts.	Core	76
Confer with engineering, supervisory, or manufacturing personnel to exchange technical information.	Core	76
Separate scrap waste and related materials for reuse, recycling, or disposal.	Core	75

Tasks	Task Description	Rank by Importance (Out of 100)
Check work pieces to ensure that they are properly lubricated or cooled.	Core	73
Support metalworking projects from planning and fabrication through assembly, inspection, and testing, using knowledge of machine functions, metal properties, and mathematics.	Supplemental	85
Install repaired parts into equipment or install new equipment.	Supplemental	78
Dismantle machines or equipment, using hand tools or power tools to examine parts for defects and replace defective parts where needed.	Supplemental	76
Test experimental models under simulated operating conditions, for purposes such as development, standardization, or feasibility of design.	Supplemental	74
Set up or operate metalworking, brazing, heat-treating, welding, or cutting equipment.	Supplemental	74
Prepare working sketches for the illustration of product appearance.	Supplemental	72
Establish work procedures for fabricating new structural products, using a variety of metalworking machines.	Supplemental	72
Install experimental parts or assemblies, such as hydraulic systems, electrical wiring, lubricants, or batteries into machines or mechanisms.	Supplemental	64
Advise clients about the materials being used for finished products.	Supplemental	64

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

National Working Conditions

Machinists Some machinists and tool and die makers work evenings and weekends because facilities may operate around the clock.

Machinists held about 396,200 jobs in 2016. The largest employers of machinists were as follows:

Machine shops 21%
Machinery manufacturing 20
Transportation equipment manufacturing 12
Employment services 5
Merchant wholesalers, durable goods 4

Tool and die makers held about 72,500 jobs in 2016. The largest employers of tool and die makers were as follows:

Metalworking machinery manufacturing 23%
Motor vehicle parts manufacturing 16
Forging and stamping 8
Aerospace product and parts manufacturing 5
Machine shops; turned product; and screw, nut, and bolt manufacturing 5

Injuries and Illnesses

Because machinists and tool and die makers work around machine tools that may present hazards, these workers must follow precautions to avoid injuries. For example, workers must wear protective equipment, such as safety glasses, to shield against bits of flying metal, earplugs to dampen the noise produced by machinery, and masks to limit their exposure to fumes.

Work Schedules

Although many machinists and tool and die makers work full time during regular business hours, some work evenings and weekends because facilities may operate around the clock. About 1 in 4 worked more than 40 hours a week in 2016.

Source: U.S. Department of Labor Bureau of Labor Statistics

Typical Work Conditions

This section shows the most common work conditions required by Machinists in order of importance.

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Wear Common Protective or Safety Equipment such as Safety Shoes, Glasses, Gloves, Hearing Protection, Hard Hats, or Life Jackets	How much does this job require wearing common protective or safety equipment such as safety shoes, glasses, gloves, hard hats or life jackets?	99
Spend Time Using Your Hands to Handle, Control, or Feel Objects, Tools, or Controls	How much does this job require using your hands to handle, control, or feel objects, tools or controls?	96
Importance of Being Exact or Accurate	How important is being very exact or highly accurate in performing this job?	90
Face-to-Face Discussions	How often do you have to have face-to-face discussions with individuals or teams in this job?	88
Spend Time Standing	How much does this job require standing?	88
Pace Determined by Speed of Equipment	How important is it to this job that the pace is determined by the speed of equipment or machinery? (This does not refer to keeping busy at all times on this job.)	83
Time Pressure	How often does this job require the worker to meet strict deadlines?	81
Freedom to Make Decisions	How much decision making freedom, without supervision, does the job offer?	79
Indoors, Environmentally Controlled	How often does this job require working indoors in environmentally controlled conditions?	77
Spend Time Making Repetitive Motions	How much does this job require making repetitive motions?	76

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Sounds, Noise Levels Are Distracting or Uncomfortable	How often does this job require working exposed to sounds and noise levels that are distracting or uncomfortable?	73
Exposed to Hazardous Equipment	How often does this job require exposure to hazardous equipment?	73
Importance of Repeating Same Tasks	How important is repeating the same physical activities (e.g., key entry) or mental activities (e.g., checking entries in a ledger) over and over, without stopping, to performing this job?	72
Structured versus Unstructured Work	To what extent is this job structured for the worker, rather than allowing the worker to determine tasks, priorities, and goals?	72
Work With Work Group or Team	How important is it to work with others in a group or team in this job?	70
Contact With Others	How much does this job require the worker to be in contact with others (face-to-face, by telephone, or otherwise) in order to perform it?	69
Responsible for Others' Health and Safety	How much responsibility is there for the health and safety of others in this job?	68
Frequency of Decision Making	How frequently is the worker required to make decisions that affect other people, the financial resources, and/or the image and reputation of the organization?	68
Impact of Decisions on Co-workers or Company Results	What results do your decisions usually have on other people or the image or reputation or financial resources of your employer?	65
Coordinate or Lead Others	How important is it to coordinate or lead others in accomplishing work activities in this job?	63
Spend Time Bending or Twisting the Body	How much does this job require bending or twisting your body?	57
Responsibility for Outcomes and Results	How responsible is the worker for work outcomes and results of other workers?	57
Physical Proximity	To what extent does this job require the worker to perform job tasks in close physical proximity to other people?	57
Exposed to Minor Burns, Cuts, Bites, or Stings	How often does this job require exposure to minor burns, cuts, bites, or stings?	54
Exposed to Contaminants	How often does this job require working exposed to contaminants (such as pollutants, gases, dust or odors)?	54

Work Condition	Work Condition Description	Rank by Importance (Out of 100)
Level of Competition	To what extent does this job require the worker to compete or to be aware of competitive pressures?	54
Degree of Automation	How automated is the job?	51
Consequence of Error	How serious would the result usually be if the worker made a mistake that was not readily correctable?	51
Spend Time Walking and Running	How much does this job require walking and running?	45
Deal With External Customers	How important is it to work with external customers or the public in this job?	41
Electronic Mail	How often do you use electronic mail in this job?	38
Telephone	How often do you have telephone conversations in this job?	35
Letters and Memos	How often does the job require written letters and memos?	32
Frequency of Conflict Situations	How often are there conflict situations the employee has to face in this job?	29
Very Hot or Cold Temperatures	How often does this job require working in very hot (above 90 F degrees) or very cold (below 32 F degrees) temperatures?	28
Deal With Unpleasant or Angry People	How frequently does the worker have to deal with unpleasant, angry, or discourteous individuals as part of the job requirements?	23
Spend Time Sitting	How much does this job require sitting?	22
Indoors, Not Environmentally Controlled	How often does this job require working indoors in non-controlled environmental conditions (e.g., warehouse without heat)?	21
Extremely Bright or Inadequate Lighting	How often does this job require working in extremely bright or inadequate lighting conditions?	20
In an Open Vehicle or Equipment	How often does this job require working in an open vehicle or equipment (e.g., tractor)?	19

Work Values and Needs

This section shows the information on the current work values for your selected occupation.

Work Value	Work Value Description	Rank By Extent (Out of 100)

Work Value	Work Value Description	Rank By Extent (Out of 100)
Support	Occupations that satisfy this work value offer supportive management that stands behind employees. Corresponding needs are Company Policies, Supervision: Human Relations and Supervision: Technical.	72
Working Conditions	Occupations that satisfy this work value offer job security and good working conditions. Corresponding needs are Activity, Compensation, Independence, Security, Variety and Working Conditions.	39
Independence	Occupations that satisfy this work value allow employees to work on their own and make decisions. Corresponding needs are Creativity, Responsibility and Autonomy.	39
Achievement	Occupations that satisfy this work value are results oriented and allow employees to use their strongest abilities, giving them a feeling of accomplishment. Corresponding needs are Ability Utilization and Achievement.	28
Recognition	Occupations that satisfy this work value offer advancement, potential for leadership, and are often considered prestigious. Corresponding needs are Advancement, Authority, Recognition and Social Status.	28

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Typical Tools

This section shows common tools used by Machinists.

Detailed Tool	Tool Group
Angle plates	Adjustable angle plate
Adjustable wrenches	Adjustable wrenches
Undercut tools	Angle cutter
Anvils	Anvils
Grinding wheel arbors	Arbors
Ball peen hammers	Ball peen hammer
Grinding dogs	Bench dog
Milling vises	Bench vises
Binocular light compound microscopes	Binocular light compound microscopes
Torches	Blow torch
Boring bars	Boring machines
Boring tools	Boring machines
Horizontal boring bars	Boring machines
Calipers	Calipers
Dial calipers	Calipers

Detailed Tool	Tool Group
Hermaphrodite calipers	Calipers
Inside spring calipers	Calipers
Outside spring calipers	Calipers
Vernier calipers	Calipers
Vernier gear tooth calipers	Calipers
Centrifugal spin casters	Casting machines
Edge finders	Center gauge
Chamfer tools	Chamfering machine
Chucks	Chucks
Cold chisels	Cold chisels
Square chisels	Cold chisels
Knee mills	Column and knee milling machine
Combination pliers	Combination pliers
Combination wrenches	Combination wrenches
Coordinate measuring machines CMM	Coordinate measuring machines CMM
Ring gauges	Cylinder gauge
Deburring tools	Deburring tool
Desktop computers	Desktop computers
Dial indicators	Dial indicator or dial gauge
Shims	Double ended stud
Radial drill presses	Drill press or radial drill
Radial drills	Drill press or radial drill
Sensitive drill presses	Drill press or radial drill
Center drills	Drilling machines
Pillar drill machines	Drilling machines
Side cutting pliers	End cut pliers
Full face shields	Facial shields
Angled feeler gauges	Feeler gauges
Feeler gauges	Feeler gauges
Flat files	Flat hand file
Forklifts	Forklifts
Marking blocks	Gage block set
Parallel blocks	Gage block set
V blocks	Gage block set
Oxyacetylene welding equipment	Gas welding or brazing or cutting apparatus
Grinders	Grinders
Crankshaft grinders	Grinding machines
Valve grinding machines	Grinding machines
Hacksaws	Hacksaw
Power hacksaws	Hacksaw

Detailed Tool	Tool Group
Half-round files	Half round file
Brass hammers	Hammers
Composition hammers	Hammers
Machinists' hammers	Hammers
Hand clamps	Hand clamps
Reamers	Hand reamer
Gauges	Height gauges
Height gauges	Height gauges
Planer gauges	Height gauges
Vernier height gauges	Height gauges
Hex keys	Hex keys
Hex wrenches	Hex keys
Resurfacing machines	Honing machine
Horizontal mills	Horizontal machining center
Computerized numerical control CNC turning lathes	Horizontal turning center
Drum lathes	Horizontal turning center
Engine lathes	Horizontal turning center
Flywheel lathes	Horizontal turning center
Horizontal lathes	Horizontal turning center
Turning lathes	Horizontal turning center
Hydraulic presses	Hydraulic press frames
Heat-treating equipment	Induction heating machine
Ladders	Ladders
Laser printers	Laser printers
Spirit levels	Levels
Channel lock pliers	Locking pliers
Milling angle form cutters	Machine end mill
Magnetic retrievers	Magnetic tools
Arbor presses	Manual press brake
Brake presses	Manual press brake
Bandsaws	Metal band sawing machine
Broachers	Metal broaching machines
Aviation snips	Metal cutters
Metal inert gas MIG welders	Metal inert gas welding machine
Inside micrometers	Micrometers
Micrometers	Micrometers
Outside micrometers	Micrometers
Single-cut mill saw files	Mill saw file
Computerized numerical control CNC machining centers	Milling machines

Detailed Tool	Tool Group
Milling machines	Milling machines
Multi-axis computerized numerical control CNC machines	Multi-tasking or universal machining center
Needlenose pliers	Needlenose pliers
Personal computers	Personal computers
Personal digital assistants PDA	Personal digital assistant PDAs or organizers
Pipe wrenches	Pipe wrenches
Screw pitch gauges	Pitch measuring instruments
Planers	Planing machines
Plasma welders	Plasma arc welding machine
Platforms	Platform lift
Staging equipment	Platform lift
Sandblasters	Pneumatic sanding machines
Buffers	Power buffers
Chippers	Power chippers
Combination drills	Power drills
Power drills	Power drills
Cylindrical grinders	Power grinders
Jointers	Power planes
Power sanders	Power sanders
Cold saws	Power saws
Cutoff saws	Power saws
Vernier bevel protractors	Protractors
Pry bars	Pry bars
Prick punches	Punches or nail sets or drifts
Punches	Punches or nail sets or drifts
Putty knives	Putty knives
Radius gauges	Radius gauge
Ratchet sets	Ratchets
Rubber mallets	Rubber mallet
Steel rules	Rulers
Welding lenses	Safety glasses
Hand saws	Saws
Phillips head screwdrivers	Screwdrivers
Screwdrivers	Screwdrivers
Spindle blade screwdrivers	Screwdrivers
Scribers	Scribers
Shapers	Shaper cutter
Cylinder honers	Sharpening stones or tools or kits
Sharpening equipment	Sharpening stones or tools or kits

Detailed Tool	Tool Group
Beverly shears	Shears
Metal shears	Shears
Shears	Shears
Shielded arc welding tools	Shielded metal arc welding or stick welding machine
Sine bars	Sine bar
Sledgehammers	Sledge hammer
Machine shop rigging equipment	Slings
Socket wrench sets	Socket sets
Handheld welders	Spot welding machine
Portable welding equipment	Spot welding machine
Machinists' squares	Squares
Surface gauges	Surface gauge
Surface grinding machines	Surface grinding machine
Swaging tools	Swaging tools
Metal cutting taps	Taps
Telescoping gauges	Telescoping gauge
Metal spray equipment	Thermal spray machine
Thread gauges	Thread counters or gauges
Pipe threaders	Threading dies
Threading machines	Threading machine
Tongs	Tongs
Breaker lathes	Tracer or duplicating or contouring lathe
Lathes	Tracer or duplicating or contouring lathe
3-axis computerized numerical control CNC machines	Traveling column milling machine
Tube benders	Tube bending machine
Tungsten inert gas TIG welding equipment	Tungsten inert gas welding machine
Turret lathes	Turret lathe
Vertical turret lathes VTL	Turret lathe
Utility knives	Utility knives
Vertical milling machines	Vertical machining center
Soldering equipment	Wave soldering machine
Steel wedges	Wedges
Wedges	Wedges
Brazing equipment	Welder torch
Welding shields	Welding masks
Workshop cranes	Workshop cranes

Typical Technology

This section shows common technology used by Machinists.

Detailed Technology	Technology Group
Armchair Machinist software	Analytical or scientific software
CNC Consulting Machinists' Calculator	Analytical or scientific software
Kentech Kipware Trig Kalculator	Analytical or scientific software
3D Printing software	Computer aided design CAD software
Autodesk AutoCAD	Computer aided design CAD software
Computer aided design CAD software	Computer aided design CAD software
Dassault Systemes CATIA	Computer aided design CAD software
Kentech Kipware Studio	Computer aided design CAD software
OnShape	Computer aided design CAD software
PTC Creo Parametric	Computer aided design CAD software
Siemens NX	Computer aided design CAD software
SolidCAM	Computer aided design CAD software
Autodesk Fusion 360	Computer aided manufacturing CAM software
Autodesk HSMWorks	Computer aided manufacturing CAM software
CNC Mastercam	Computer aided manufacturing CAM software
CNC TurboCAD/CAM	Computer aided manufacturing CAM software
Computer aided manufacturing CAM software	Computer aided manufacturing CAM software
Dassault Systemes SOLIDWORKS	Computer aided manufacturing CAM software
GRZ Software MeshCAM	Computer aided manufacturing CAM software
JETCAM	Computer aided manufacturing CAM software
OneCNC CAD/CAM	Computer aided manufacturing CAM software
Vero Software SURFCAM	Computer aided manufacturing CAM software
Microsoft Outlook	Electronic mail software
ERP software	Enterprise resource planning ERP software
JobBOSS	Enterprise resource planning ERP software
SAP	Enterprise resource planning ERP software
EditCNC	Industrial control software
Mazak Mazatrol SMART CNC	Industrial control software
Microsoft Office	Office suite software
Microsoft PowerPoint	Presentation software
Hexagon Metrology PC-DMIS	Procedure management software
Microsoft Excel	Spreadsheet software
Microsoft Word	Word processing software

Licensing Information

There is no data available for Machinists in Louisiana.

Typical Knowledge Categories

This section shows the most common knowledge categories required by Machinists in order of importance. Click on a link in the Knowledge Category column to view more detailed information.

Knowledge Category	Knowledge Category Description	Rank by Importance (Out of 100)
Mathematics	Knowledge of arithmetic, algebra, geometry, calculus, statistics, and their applications.	62
Mechanical	Knowledge of machines and tools, including their designs, uses, repair, and maintenance.	58
Production and Processing	Knowledge of raw materials, production processes, quality control, costs, and other techniques for maximizing the effective manufacture and distribution of goods.	57
Design	Knowledge of design techniques, tools, and principles involved in production of precision technical plans, blueprints, drawings, and models.	50
Engineering and Technology	Knowledge of the practical application of engineering science and technology. This includes applying principles, techniques, procedures, and equipment to the design and production of various goods and services.	43
English Language	Knowledge of the structure and content of the English language including the meaning and spelling of words, rules of composition, and grammar.	43
Customer and Personal Service	Knowledge of principles and processes for providing customer and personal services. This includes customer needs assessment, meeting quality standards for services, and evaluation of customer satisfaction.	35
Computers and Electronics	Knowledge of circuit boards, processors, chips, electronic equipment, and computer hardware and software, including applications and programming.	34
Physics	Knowledge and prediction of physical principles, laws, their interrelationships, and applications to understanding fluid, material, and atmospheric dynamics, and mechanical, electrical, atomic and sub- atomic structures and processes.	30
Administration and Management	Knowledge of business and management principles involved in strategic planning, resource allocation, human resources modeling, leadership technique, production methods, and coordination of people and resources.	28
Clerical	Knowledge of administrative and clerical procedures and systems such as word processing, managing files and records, stenography and transcription, designing forms, and other office procedures and terminology.	26
Building and Construction	Knowledge of materials, methods, and the tools involved in the construction or repair of houses, buildings, or other structures such as highways and roads.	21

Knowledge Category	Knowledge Category Description	Rank by Importance (Out of 100)
Personnel and Human Resources	Knowledge of principles and procedures for personnel recruitment, selection, training, compensation and benefits, labor relations and negotiation, and personnel information systems.	20

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Typical Work Abilities Required

This section shows the results of a national survey listing the most common work abilities required by Machinists in order of importance. Click on a link in the Work Ability column to view more detailed information.

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Arm-Hand Steadiness	The ability to keep your hand and arm steady while moving your arm or while holding your arm and hand in one position.	66
Finger Dexterity	The ability to make precisely coordinated movements of the fingers of one or both hands to grasp, manipulate, or assemble very small objects.	66
Manual Dexterity	The ability to quickly move your hand, your hand together with your arm, or your two hands to grasp, manipulate, or assemble objects.	66
Control Precision	The ability to quickly and repeatedly adjust the controls of a machine or a vehicle to exact positions.	63
Deductive Reasoning	The ability to apply general rules to specific problems to produce answers that make sense.	56
Near Vision	The ability to see details at close range (within a few feet of the observer).	56
Problem Sensitivity	The ability to tell when something is wrong or is likely to go wrong. It does not involve solving the problem, only recognizing there is a problem.	56
Selective Attention	The ability to concentrate on a task over a period of time without being distracted.	56
Information Ordering	The ability to arrange things or actions in a certain order or pattern according to a specific rule or set of rules (e.g., patterns of numbers, letters, words, pictures, mathematical operations).	53
Multilimb Coordination	The ability to coordinate two or more limbs (for example, two arms, two legs, or one leg and one arm) while sitting, standing, or lying down. It does not involve performing the activities while the whole body is in motion.	53
Oral Comprehension	The ability to listen to and understand information and ideas presented through spoken words and sentences.	53

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Rate Control	The ability to time your movements or the movement of a piece of equipment in anticipation of changes in the speed and/or direction of a moving object or scene.	53
Visualization	The ability to imagine how something will look after it is moved around or when its parts are moved or rearranged.	53
Category Flexibility	The ability to generate or use different sets of rules for combining or grouping things in different ways.	50
Flexibility of Closure	The ability to identify or detect a known pattern (a figure, object, word, or sound) that is hidden in other distracting material.	50
Inductive Reasoning	The ability to combine pieces of information to form general rules or conclusions (includes finding a relationship among seemingly unrelated events).	50
Oral Expression	The ability to communicate information and ideas in speaking so others will understand.	50
Perceptual Speed	The ability to quickly and accurately compare similarities and differences among sets of letters, numbers, objects, pictures, or patterns. The things to be compared may be presented at the same time or one after the other. This ability also includes comparing a presented object with a remembered object.	50
Reaction Time	The ability to quickly respond (with the hand, finger, or foot) to a signal (sound, light, picture) when it appears.	50
Speech Clarity	The ability to speak clearly so others can understand you.	50
Speech Recognition	The ability to identify and understand the speech of another person.	50
Written Comprehension	The ability to read and understand information and ideas presented in writing.	50
Far Vision	The ability to see details at a distance.	47
Mathematical Reasoning	The ability to choose the right mathematical methods or formulas to solve a problem.	47
Auditory Attention	The ability to focus on a single source of sound in the presence of other distracting sounds.	44
Extent Flexibility	The ability to bend, stretch, twist, or reach with your body, arms, and/or legs.	44
Number Facility	The ability to add, subtract, multiply, or divide quickly and correctly.	44
Trunk Strength	The ability to use your abdominal and lower back muscles to support part of the body repeatedly or continuously over time without 'giving out' or fatiguing.	44
Wrist-Finger Speed	The ability to make fast, simple, repeated movements of the fingers, hands, and wrists.	44

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Written Expression	The ability to communicate information and ideas in writing so others will understand.	44
Depth Perception	The ability to judge which of several objects is closer or farther away from you, or to judge the distance between you and an object.	41
Fluency of Ideas	The ability to come up with a number of ideas about a topic (the number of ideas is important, not their quality, correctness, or creativity).	41
Hearing Sensitivity	The ability to detect or tell the differences between sounds that vary in pitch and loudness.	41
Originality	The ability to come up with unusual or clever ideas about a given topic or situation, or to develop creative ways to solve a problem.	41
Response Orientation	The ability to choose quickly between two or more movements in response to two or more different signals (lights, sounds, pictures). It includes the speed with which the correct response is started with the hand, foot, or other body part.	41
Time Sharing	The ability to shift back and forth between two or more activities or sources of information (such as speech, sounds, touch, or other sources).	41
Static Strength	The ability to exert maximum muscle force to lift, push, pull, or carry objects.	38
Speed of Closure	The ability to quickly make sense of, combine, and organize information into meaningful patterns.	35
Visual Color Discrimination	The ability to match or detect differences between colors, including shades of color and brightness.	35
Dynamic Strength	The ability to exert muscle force repeatedly or continuously over time. This involves muscular endurance and resistance to muscle fatigue.	31
Memorization	The ability to remember information such as words, numbers, pictures, and procedures.	31
Stamina	The ability to exert yourself physically over long periods of time without getting winded or out of breath.	31
Gross Body Coordination	The ability to coordinate the movement of your arms, legs, and torso together when the whole body is in motion.	28
Gross Body Equilibrium	The ability to keep or regain your body balance or stay upright when in an unstable position.	25
Spatial Orientation	The ability to know your location in relation to the environment or to know where other objects are in relation to you.	25
Speed of Limb Movement	The ability to quickly move the arms and legs.	25
Explosive Strength	The ability to use short bursts of muscle force to propel oneself (as in jumping or sprinting), or to throw an object.	22

Work Ability	Work Ability Description	Rank by Importance (Out of 100)
Sound Localization	The ability to tell the direction from which a sound originated.	22
Peripheral Vision	The ability to see objects or movement of objects to one's side when the eyes are looking ahead.	19
Dynamic Flexibility	The ability to quickly and repeatedly bend, stretch, twist, or reach out with your body, arms, and/or legs.	16
Glare Sensitivity	The ability to see objects in the presence of glare or bright lighting.	16
Night Vision	The ability to see under low light conditions.	13

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Typical Work Interests

This section shows the results of a national survey listing the most common work interests for Machinists in order of importance.

Work Interest	Work Interest Description	Rank by Importance (Out of 100)
Realistic	Realistic occupations frequently involve work activities that include practical, hands-on problems and solutions. They often deal with plants, animals, and real-world materials like wood, tools, and machinery. Many of the occupations require working outside, and do not involve a lot of paperwork or working closely with others.	100
Conventional	Conventional occupations frequently involve following set procedures and routines. These occupations can include working with data and details more than with ideas. Usually there is a clear line of authority to follow.	72
Investigative	Investigative occupations frequently involve working with ideas, and require an extensive amount of thinking. These occupations can involve searching for facts and figuring out problems mentally.	61

Source: This information is based on O*NET™ data. O*NET is a trademark registered to the U.S. Department of Labor, Employment and Training Administration.

Typical Work Styles

This section shows the most common work styles required by Machinists in order of importance. Click on a link in the Work Style column to view more detailed information.

Work Style	Work Style Description	Rank by Importance (Out of 100)
Attention to Detail	Job requires being careful about detail and thorough in completing work tasks.	89
Dependability	Job requires being reliable, responsible, and dependable, and fulfilling obligations.	83

Work Style	Work Style Description	Rank by Importance (Out of 100)
Independence	Job requires developing one's own ways of doing things, guiding oneself with little or no supervision, and depending on oneself to get things done.	79
Analytical Thinking	Job requires analyzing information and using logic to address work-related issues and problems.	75
Innovation	Job requires creativity and alternative thinking to develop new ideas for and answers to work-related problems.	72
Cooperation	Job requires being pleasant with others on the job and displaying a good-natured, cooperative attitude.	71
Integrity	Job requires being honest and ethical.	70
Stress Tolerance	Job requires accepting criticism and dealing calmly and effectively with high stress situations.	70
Achievement/Effort	Job requires establishing and maintaining personally challenging achievement goals and exerting effort toward mastering tasks.	69
Initiative	Job requires a willingness to take on responsibilities and challenges.	68
Adaptability/Flexibility	Job requires being open to change (positive or negative) and to considerable variety in the workplace.	67
Persistence	Job requires persistence in the face of obstacles.	65
Self Control	Job requires maintaining composure, keeping emotions in check, controlling anger, and avoiding aggressive behavior, even in very difficult situations.	65
Concern for Others	Job requires being sensitive to others' needs and feelings and being understanding and helpful on the job.	58
Social Orientation	Job requires preferring to work with others rather than alone, and being personally connected with others on the job.	46
Leadership	Job requires a willingness to lead, take charge, and offer opinions and direction.	45

Related Occupations

This section shows a list of occupations related to Machinists. Click an occupation title to see more information about that occupation.

Rank	Related Occupations	Duties	*Related By

Rank	Related Occupations	Duties	*Related By
1	Cutting, Punching, and Press Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend machines to saw, cut, shear, slit, punch, crimp, notch, bend, or straighten metal or plastic material.	SOC4
2	Extruding and Drawing Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend machines to extrude or draw thermoplastic or metal materials into tubes, rods, hoses, wire, bars, or structural shapes.	SOC4
3	Forging Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend forging machines to taper, shape, or form metal or plastic parts.	SOC4
4	Foundry Mold and Coremakers	Make or form wax or sand cores or molds used in the production of metal castings in foundries.	SOC4
5	Multiple Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend more than one type of cutting or forming machine tool or robot.	SOC4
6	Rolling Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend machines to roll steel or plastic forming bends, beads, knurls, rolls, or plate or to flatten, temper, or reduce gauge of material.	SOC4
7	Molding, Coremaking, and Casting Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend metal or plastic molding, casting, or coremaking machines to mold or cast metal or thermoplastic parts or products.	SOC4
8	Pourers and Casters, Metal	Operate hand-controlled mechanisms to pour and regulate the flow of molten metal into molds to produce castings or ingots.	SOC4
9	Cabinetmakers and Bench Carpenters	Cut, shape, and assemble wooden articles or set up and operate a variety of woodworking machines, such as power saws, jointers, and mortisers to surface, cut, or shape lumber or to fabricate parts for wood products.	O*NET
10	Computer Numerically Controlled Machine Tool Programmers, Metal and Plastic	Develop programs to control machining or processing of metal or plastic parts by automatic machine tools, equipment, or systems.	O*NET

Rank	Related Occupations	Duties	*Related By
11	Computer-Controlled Machine Tool Operators, Metal and Plastic	Operate computer-controlled machines or robots to perform one or more machine functions on metal or plastic work pieces.	O*NET
12	Drilling and Boring Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend drilling machines to drill, bore, ream, mill, or countersink metal or plastic work pieces.	O*NET
13	Electric Motor, Power Tool, and Related Repairers	Repair, maintain, or install electric motors, wiring, or switches.	O*NET
14	Electrical and Electronics Repairers, Commercial and Industrial Equipment	Repair, test, adjust, or install electronic equipment, such as industrial controls, transmitters, and antennas.	O*NET
15	Grinding, Lapping, Polishing, and Buffing Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend grinding and related tools that remove excess material or burrs from surfaces, sharpen edges or corners, or buff, hone, or polish metal or plastic work pieces.	O*NET
16	Industrial Machinery Mechanics	Repair, install, adjust, or maintain industrial production and processing machinery or refinery and pipeline distribution systems.	O*NET
17	Lathe and Turning Machine Tool Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend lathe and turning machines to turn, bore, thread, form, or face metal or plastic materials, such as wire, rod, or bar stock.	O*NET
18	Mechanical Engineering Technicians	Apply theory and principles of mechanical engineering to modify, develop, test, or calibrate machinery and equipment under direction of engineering staff or physical scientists.	O*NET
19	Milling and Planing Machine Setters, Operators, and Tenders, Metal and Plastic	Set up, operate, or tend milling or planing machines to mill, plane, shape, groove, or profile metal or plastic work pieces.	O*NET
20	Model Makers, Metal and Plastic	Set up and operate machines, such as lathes, milling and engraving machines, and jig borers to make working models of metal or plastic objects. Includes template makers.	O*NET

Rank	Related Occupations	Duties	*Related By
21	Model Makers, Wood	Construct full-size and scale wooden precision models of products. Includes wood jig builders and loft workers.	O*NET
22	Nuclear Equipment Operation Technicians	Operate equipment used for the release, control, or utilization of nuclear energy to assist scientists in laboratory or production activities.	O*NET
23	Patternmakers, Metal and Plastic	Lay out, machine, fit, and assemble castings and parts to metal or plastic foundry patterns, core boxes, or match plates.	O*NET
24	Patternmakers, Wood	Plan, lay out, and construct wooden unit or sectional patterns used in forming sand molds for castings.	O*NET
25	Tool and Die Makers	Analyze specifications, lay out metal stock, set up and operate machine tools, and fit and assemble parts to make and repair dies, cutting tools, jigs, fixtures, gauges, and machinists' hand tools.	O*NET
26	Woodworking Machine Setters, Operators, and Tenders, Except Sawing	Set up, operate, or tend woodworking machines, such as drill presses, lathes, shapers, routers, sanders, planers, and wood nailing machines. May operate CNC equipment.	O*NET
27	Brickmasons and Blockmasons	Lay and bind building materials, such as brick, structural tile, concrete block, cinder block, glass block, and terra-cotta block, with mortar and other substances to construct or repair walls, partitions, arches, sewers, and other structures.	O*NET
28	Cooling and Freezing Equipment Operators and Tenders	Operate or tend equipment, such as cooling and freezing units, refrigerators, batch freezers, and freezing tunnels, to cool or freeze products, food, blood plasma, and chemicals.	O*NET
29	Earth Drillers, Except Oil and Gas	Operate a variety of drills such as rotary, churn, and pneumatic to tap sub-surface water and salt deposits, to remove core samples during mineral exploration or soil testing, and to facilitate the use of explosives in mining or construction. May use explosives. Includes horizontal and earth boring machine operators.	O*NET
30	Extruding, Forming, Pressing, and Compacting Machine Setters, Operators, and Tenders	Set up, operate, or tend machines, such as glass forming machines, plodder machines, and tuber machines, to shape and form products, such as glassware, food, rubber, soap, brick, tile, clay, wax, tobacco, or cosmetics.	O*NET
31	Glass Blowers, Molders, Benders, and Finishers	Shape molten glass according to patterns.	O*NET
32	Metal-Refining Furnace Operators and Tenders	Operate or tend furnaces, such as gas, oil, coal, electric-arc or electric induction, open-hearth, or oxygen furnaces, to melt and refine metal before casting or to produce specified types of steel.	O*NET

Rank	Related Occupations	Duties	*Related By
33	Mixing and Blending Machine Setters, Operators, and Tenders	Set up, operate, or tend machines to mix or blend materials, such as chemicals, tobacco, liquids, color pigments, or explosive ingredients.	O*NET
34	Printing Press Operators	Set up and operate digital, letterpress, lithographic, flexographic, gravure, or other printing machines. Includes short-run offset printing presses.	O*NET
35	Rough Carpenters	Build rough wooden structures, such as concrete forms, scaffolds, tunnel, bridge, or sewer supports, billboard signs, and temporary frame shelters, according to sketches, blueprints, or oral instructions.	O*NET
36	Separating, Filtering, Clarifying, Precipitating, and Still Machine Setters, Operators, and Tenders	Set up, operate, or tend continuous flow or vat-type equipment; filter presses; shaker screens; centrifuges; condenser tubes; precipitating, fermenting, or evaporating tanks; scrubbing towers; or batch stills. These machines extract, sort, or separate liquids, gases, or solids from other materials to recover a refined product. Includes dairy processing equipment operators.	O*NET
37	Transportation Vehicle, Equipment and Systems Inspectors, Except Aviation	Inspect and monitor transportation equipment, vehicles, or systems to ensure compliance with regulations and safety standards.	O*NET

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Source: **Related By: O*NET™ - The Occupational Information Network. O*NET is a registered trademark of the US Department of Labor/Employment and Training Administration.
SOC4 - Occupational grouping based on 1st 4 digits of the Standard Occupational Classification system.

Career Ladder

This section shows the top 10 occupations and the corresponding individuals in the workforce system who were previously Machinists and have changed their occupation over the last 5 years.

Occupation Title	Number of Individuals that Moved	Percentage of Individuals that Moved
Construction Laborers	79	15.86%
Laborers and Freight, Stock, and Material Movers, Hand	64	12.85%
Heavy and Tractor-Trailer Truck Drivers	59	11.85%
Maintenance and Repair Workers, General	57	11.45%
Driver/Sales Workers	53	10.64%
Computer-Controlled Machine Tool Operators, Metal and Plastic	48	9.64%
Millwrights	40	8.03%
Helpers--Installation, Maintenance, and Repair Workers	36	7.23%

Occupation Title	Number of Individuals that Moved	Percentage of Individuals that Moved
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	31	6.22%
Helpers--Production Workers	31	6.22%

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Source: Individuals with active résumés in the workforce system.

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